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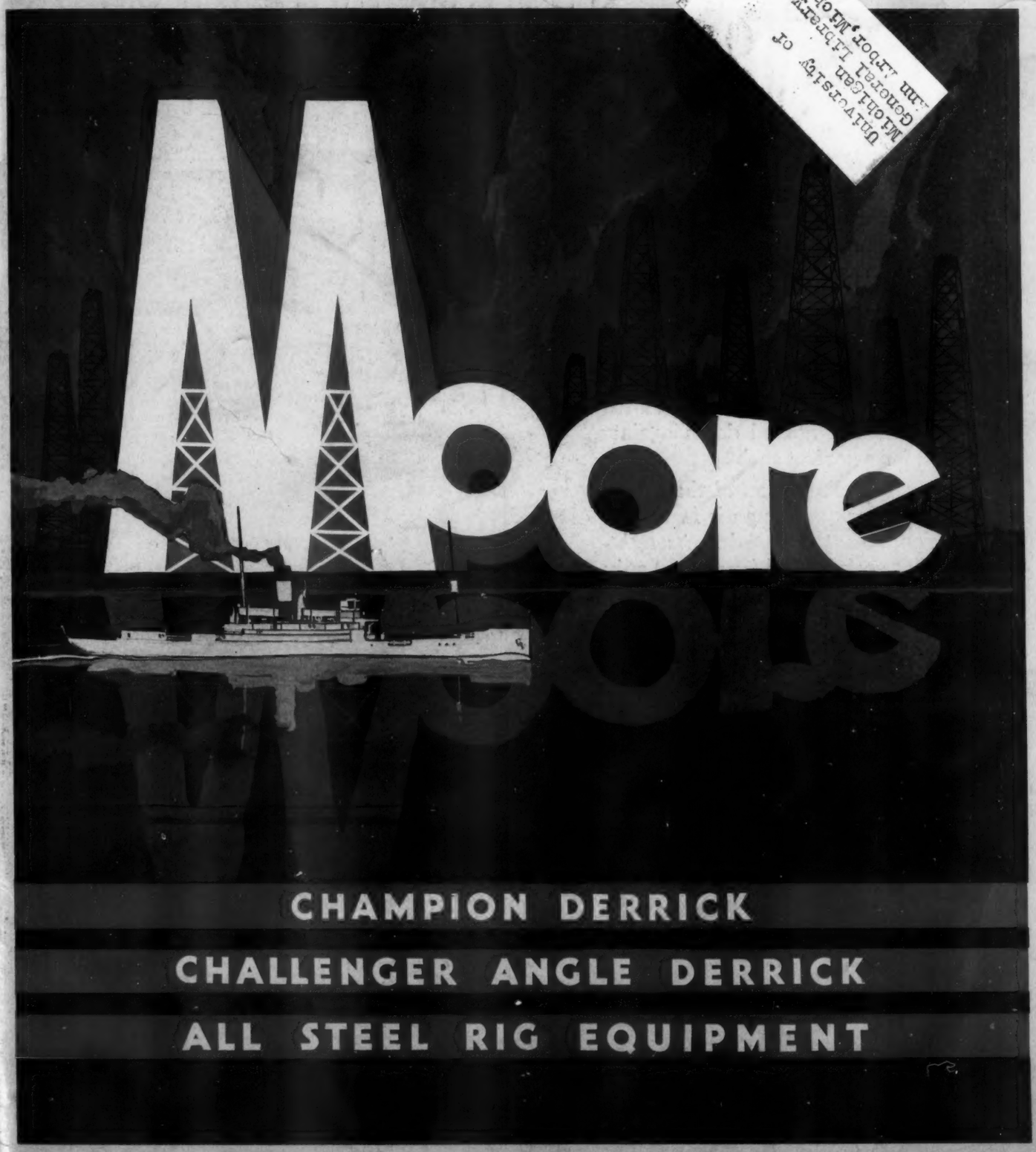

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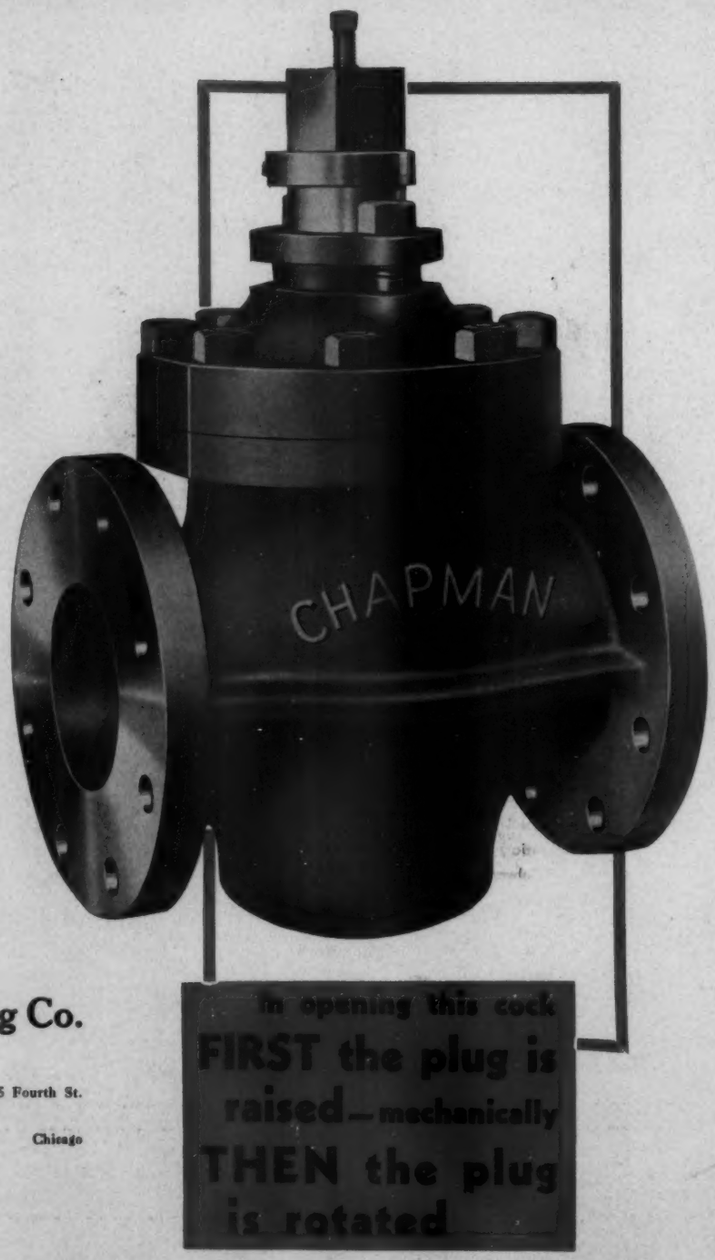

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End of Oil Field Martial Law in Sight

Highest production in 1930, week ending Feb. 22, average daily output 2,699,096 bbls. Peak of U. S. production, week ending Aug. 24, 1929, average 2,975,435 bbls.

Higher East Texas Prices Permit $1 Posting in Oklahoma. Fixing East Texas Allowable Will Stabilize Conditions

By Andrew M. Rowley

Lowest daily average crude oil production in the United States during 1930 was for week ending Dec. 27 with average output of 2,144,074 bbls.

The end of martial law in the oil fields of East Texas and Oklahoma is in sight. A price of 68 cents a barrel, posted by two major companies in East Texas, will permit buyers of Oklahoma crude to pay $1 a barrel, a condition absolutely impossible as long as the price in East Texas averaged 14 cents a barrel, which it did until martial law closed in production there. Establishment of a price of $1 in Oklahoma undoubtedly will come as soon as the major buyers in that state are assured the situation in East Texas will be regulated and is expected to be announced this week.

Rules limiting East Texas production to 300,000 or 350,000 barrels daily are expected to be issued by the Railroad Commission of Texas following the hearing now being held at Austin. If those rules are obeyed and enforced and operators do not muddy the waters with court actions, the troops will be withdrawn quickly from East Texas.

Opening of the fields in Oklahoma and limiting East Texas to a production of 350,000 barrels daily will give the United States an output of approximately 2,400,000 barrels daily, if Oklahoma produces its allowable of 550,000 barrels daily. The petroleum industry would be stabilized during the remainder of this year with that production of crude oil and prices for both crude and gasoline would strengthen further and permit a reasonable return to operators and refiners.

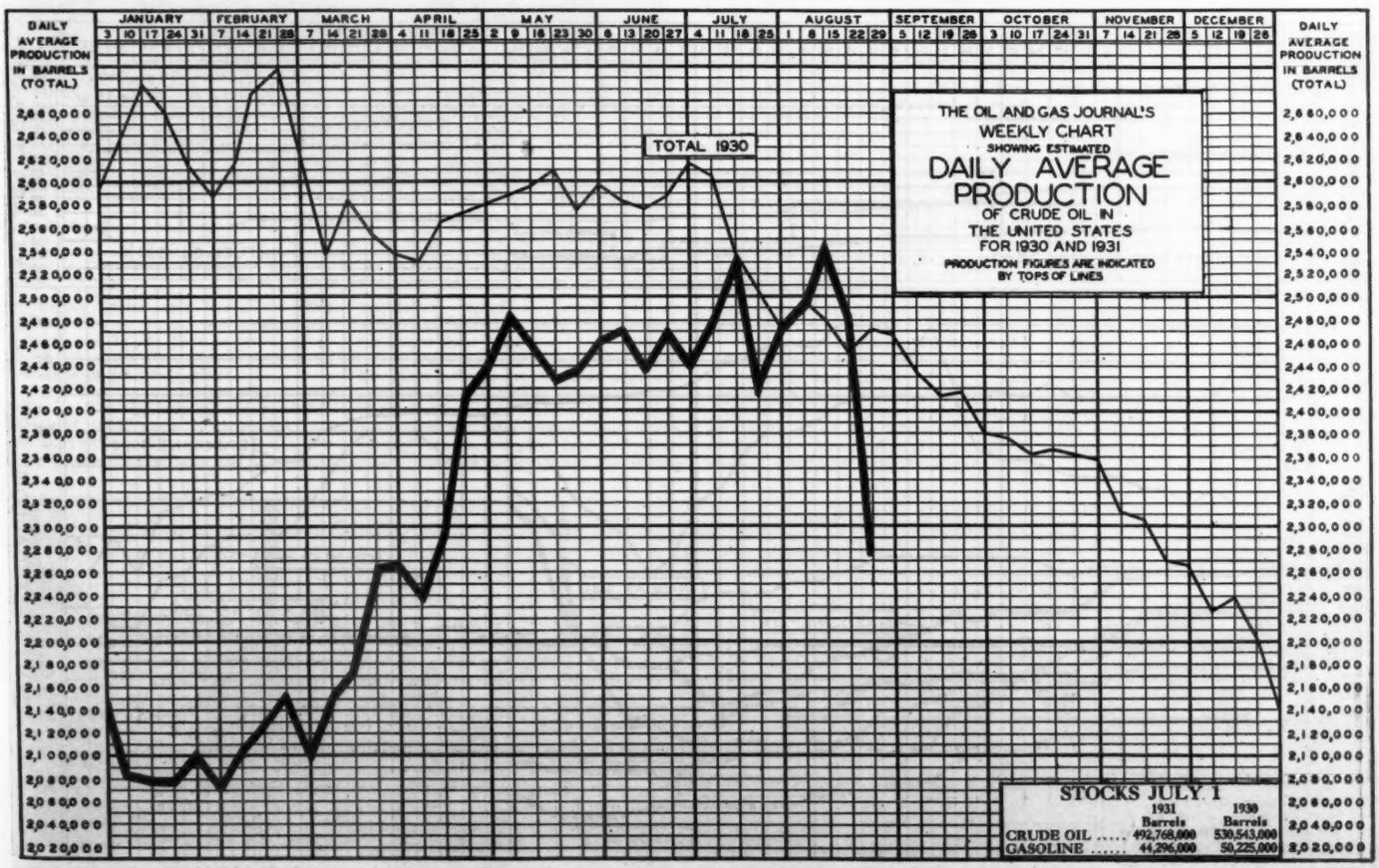
The wild orgy of producing wells to capacity indulged in by East Texas operators just before the fields were closed by the troops resulted in an estimated production of 1,200,000 during the 24 hours from Sunday to Monday morning. The fields produced 3,606,575 barrels from 7 o'clock Saturday morning until the last well was closed on Tuesday. If the shutdown is effective in East Texas during the remainder of this week, the decline in production during the current week would be approximately 500,000 barrels daily. Opening wells in that area or lifting the ban in Oklahoma this week naturally would change that figure.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of crude oil in the United States for week ended August 22 and a comparison with the previous week follows:

	Aug. 22	Aug. 15
Oklahoma—		
Oklahoma City	9,430	4,590
Seminole-St. Louis	57,710	59,640
Remainder of State	202,290	199,710
Total Oklahoma	269,430	263,940
East Texas—		
Kilgore	203,600	296,278
Lathrop	164,286	172,155
Joiner	147,339	269,602
Total East Texas	515,225	738,035
West Texas	204,572	204,875
North Central Texas	76,471	77,544
Texas Panhandle	57,820	59,220
East Central Texas	51,545	52,597
North Louisiana	29,735	30,650
Arkansas	37,440	37,390
Kansas	104,205	102,610
Total Mid-Continent area	1,346,443	1,566,861
Gulf Coast	157,352	148,742
Southwest Texas	63,058	62,762
Eastern	107,000	106,000
Rocky Mountain area	89,742	91,775
California—		
Santa Fe Springs	62,500	62,000
Long Beach	77,500	77,000
Playa Del Rey	22,500	23,000
Elwood	26,250	25,500
Kettleman Hills	70,500	65,000
Remainder of State	255,750	261,000
Total California	515,000	513,500
Total United States	2,278,595	2,489,640

→ Decrease, 211,045 Bbls. Daily ←



Gas Oils and Distillates Advance

Start of Consuming Season and Threatened Shortage Strengthens Oklahoma Market. Several Other Products Advance

By C. O. Willson

A scarcity of gas oils and furnace oil distillates was the outstanding development of the week in the Oklahoma (Group 3) market. Buyers found that the shutdown of East Texas refineries coupled with the changed operations of plants in other Mid-Continent areas had materially curtailed the supply of these heavier refined oils and very little material was being offered by sellers for either prompt or future delivery.

The high cold test and U.G.I. gas oils which were available from several sources in Oklahoma early in the month as low as five-eighths of a cent advanced to a low of 1 cent. Very little material was available at the latter figure, most of the refiners having withdrawn from the market refusing to consider new business except on contracts based on published quotations on date of shipment. The dearth of low cold test and low flash gas oils suitable for furnace oils and the higher gravity grades of furnace oil distillates was also apparent. Buyers were slow in accepting the higher prices but sellers were firm in refusing spot business except at last week's quotations.

Other Advances

The price trend in other products was upward when any changes were made. The 41-43 water white kerosene advanced to a low of 2 cents in Oklahoma with a fair demand. Most of the Oklahoma manufacturers of bright stocks advanced their quotations 2 cents the latter part of last week, being the second general increase since the first of the month. The latest advance brought the 150-160 D grade to a low of 16 cents with a price range up to 17 cents.

The U. S. Motor grade of refinery gasoline advanced to a low of 5 cents the middle of last week and since that time has been marking time awaiting additional developments in the crude oil and gasoline tank wagon markets. The opinion prevails that prices will not be increased again until there are advances in the tank wagon and service station schedules of the Middle West. As explained in these columns last week, the fact that the latter schedules have not reflected the advances in the refinery tank car prices is working a hardship on refiners with long-time contracts guaranteeing the jobber buyers a minimum margin under the tank wagon or service station prices. A general advance in the latter has been expected for several days, although the Standard Oil Co. of Indiana and other major buyers up to the time of this writing, had not indicated what action if any they intended to take.

REFINED MARKET BAROMETER

The improvement apparent in refinery gasoline prices in the Middle West and Mid-Continent since early in the month spread to the East Coast states during the past week, most of the larger refiners advancing their quotations. Tank car prices on gasoline were generally higher in all areas except California, where prices were slightly lower. The reduced output of crude oil due to shut-in production in the Mid-Continent also tended to strengthen the market position of several other products including kerosene and fuels. Natural gasolines continue firm in the Mid-Continent. Western and Pennsylvania bright stocks were advanced with higher prices quoted in some grades of steam refined stocks. Wax prices unchanged.

Mid-Continent—Refinery gasoline prices higher. Natural gasolines firm. Fuel oil, gas oil and distillate stronger and prices higher on some grades. Bright stocks advanced. Slight advances in kerosene.

East Coast—Better tone in market due to improved crude oil situation. Gasoline prices advance. Expect fuel oil and Diesel oil to recover part of recent price declines. Little trading in export market, where cheap Rumanian and Russian material continues to dominate market. Lubricants more active.

Chicago—Refinery gasoline prices advance bringing improvement in tank wagon and service station price conditions at several points. Better tone to kerosene market. Scattered advances in fuel oil and gas oil prices.

Pennsylvania—Some grades of gasoline advanced. Market strong for steam refined stocks and bright stocks and prices higher.

Gulf Coast—Shortage of crude oil due to East Texas shut down materially strengthens gasoline and gas oil markets. Fuel oil unchanged.

California—Refinery gasoline and natural gasoline prices slightly lower. No important changes in other products.

To a lesser extent, the strength in gas oils and distillates was reflected in fuel oils, particularly the higher gravities. Several companies have advanced their prices from 5 to 10 cents per barrel and others have withdrawn from the market temporarily. Coming at a time when the fuel consuming season is just starting it is believed that the developments in the fuel market will have permanent significance. Those familiar with conditions believe that the demand for furnace oils used by all types of domestic burners including office buildings, school buildings, etc., will be at least as great as it was last season. New installations of these burners have been below normal, but old installations will be operated through the season which starts in middle western and northern sections on September 1 and continues through April of next year.

East Texas Situation

Despite the opinions of many buyers to the contrary, there has not been for several months any large quantity of the best grades of furnace oil available in Oklahoma and other Mid-Continent refining groups. Actual conditions have been clouded by the rapid expansion of East Texas skimming plants.

Owners of these plants have either secured a wide gas oil cut in their plant operations or allowed the gas oil to remain in their high gravity fuel oil residuum. Both the fuel oil and gas oil usually had a cold test in excess of 100. This material was of course not suitable either as furnace oil or industrial fuel due to the high cold test. The gas oil sold as low as 15 cents per barrel and fuel

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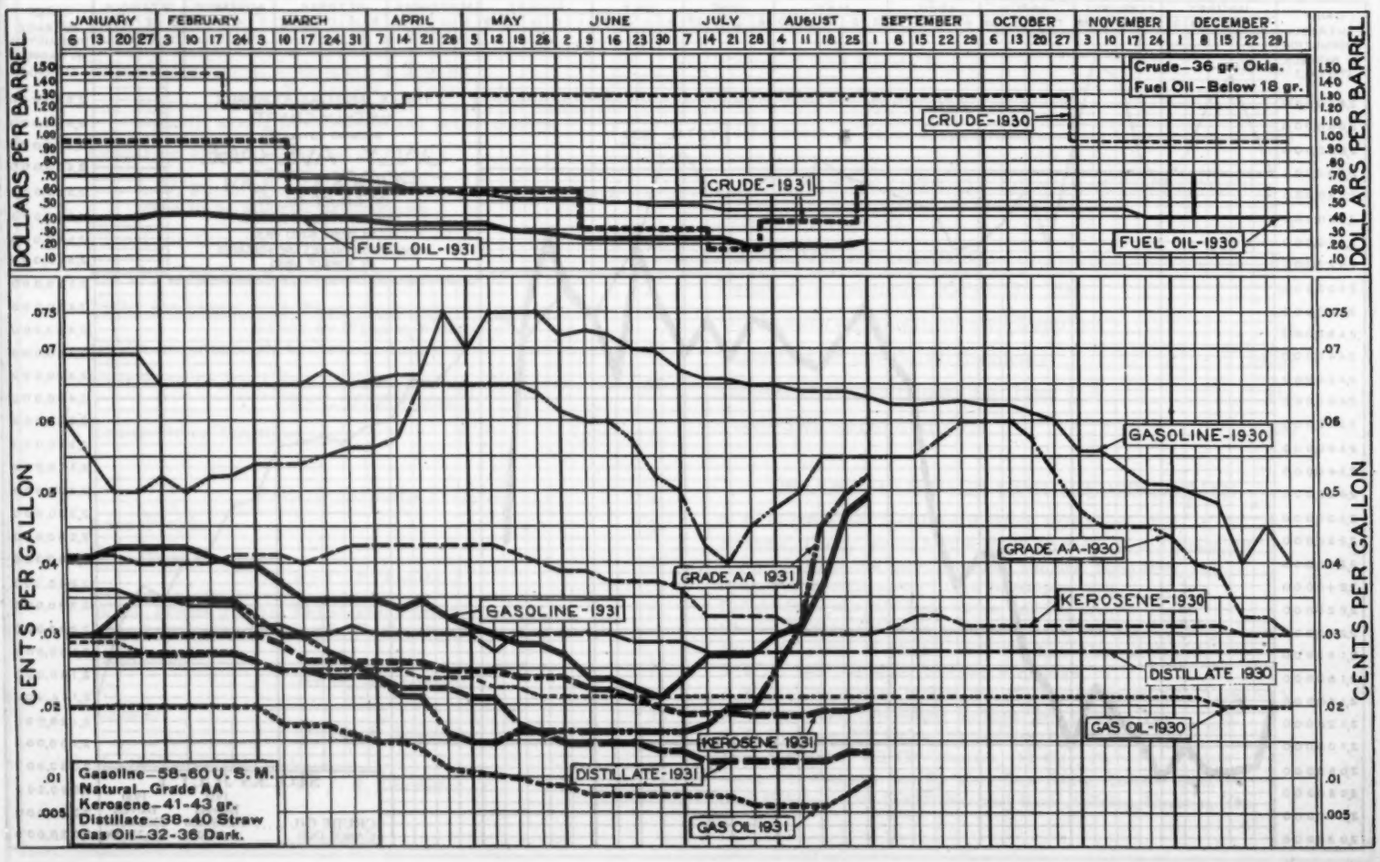


East Texas Fields Under Military Rule

Occupation of the Fields Welcomed. Transformation From Frenzied Activity Speedily Effected. Sidelights From the Air

By L. E. Bredberg

SOMEWHERE IN EAST TEXAS WITH THE TROOPS, Aug. 24. — At 7:16 on the morning of August 17 the first troop of Texas National Guard, Troop A of the 124th Cavalry, Fort Worth, pulled into the anxiously waiting town of Kilgore, in the heart of the great East Texas oil fields, these troops having mobilized in Fort Worth on August 15 and 16 when the governor gave orders to Brig. Gen. Jacob F. Wolters to have his troops mobilize and stand by for further orders. The second orders, declaring martial law covering the counties of Smith, Rusk, Gregg and Upshur Counties were issued soon thereafter, and the troops moved out in motor lorries and buses, traveling against time to reach their destination, martial law in the four counties to be levied when the first troops arrived on the scene of oil production.

There was not one single sign of hostility against the troops, and none has presented itself since their advent into the martial law zone, except from a few irate independent refiners who had hastily constructed small refineries, most of them being built out of second-hand equipment, and who had not erected any steel storage, but who were running on existing contracts, or drawing oil directly from the wells on short-time contracts. Shutting down the wells consequently hurt some of these small refiners, and a few of them have registered their displeasure, but in talking with others who looked at the shutdown from a more broadminded viewpoint, they declared it best for everybody in the long run, and although they had but little oil to run to their plants, and would be forced to shut down in four or five days after the shutdown went into effect, they nevertheless were friendly to the move that had been inaugurated to benefit the whole industry.

As Seen From the Air

In flying over the entire district on August 21 several of the small refineries were noted to be shut down, the fires being extinct, and no work going on around them, while a few others continued to run on oil which had been acquired and stored to keep them running for a few days longer.

Two state representatives and a few of the small refiners are the only ones who have registered a protest against the complete shutdown. In questioning independent operators, lease owners, landowners, royalty owners, company men and townspeople, there is generally but one answer to the question "What do you think of the shutdown?" and that answer is "I believe it is a good thing," or "It's the only thing that has been done to remedy the situation, and should have been done a long time ago." A canvas of East Texas oil men and individuals will readily show that Governor Sterling made the desired move when he ordered troops into the district to force curtailment until a new proration order can be issued and put into effect by the Railroad Commission.

L. E. Bredberg, manager of the Fort Worth office of The Oil and Gas Journal, who also is a reserve officer in the United States Army Air Corps, with First Lieut. Jule Smith, adjutant of the 2nd Squadron, 124th Cavalry, Texas National Guard, in the martial law zone in East Texas. Lieutenant Smith is in the accounting department of the Humble Oil & Refining Co. at Houston.

Captain Tom Hickman and Earl Young of the Texas Rangers who are co-operating with the National Guard in carrying out martial law orders of Governor Sterling, in the East Texas fields.

It is not known just how long the troops will be maintained in the district, but it will probably be at least a week after the new curtailment order is issued to give added force to that order, and see that it is carried out in the field. The new order will probably allocate a daily average production of around 300,000 bbls., or around 182 bbls. per day to each well. However, as things seem to be running along smoothly, with but few arrests having been made for disobeying the shutdown order, part of the troops may be moved out of the district and demobilized, the remainder kept on duty in various parts of the district to prevent infractions of the law.

Companies Retain Workers

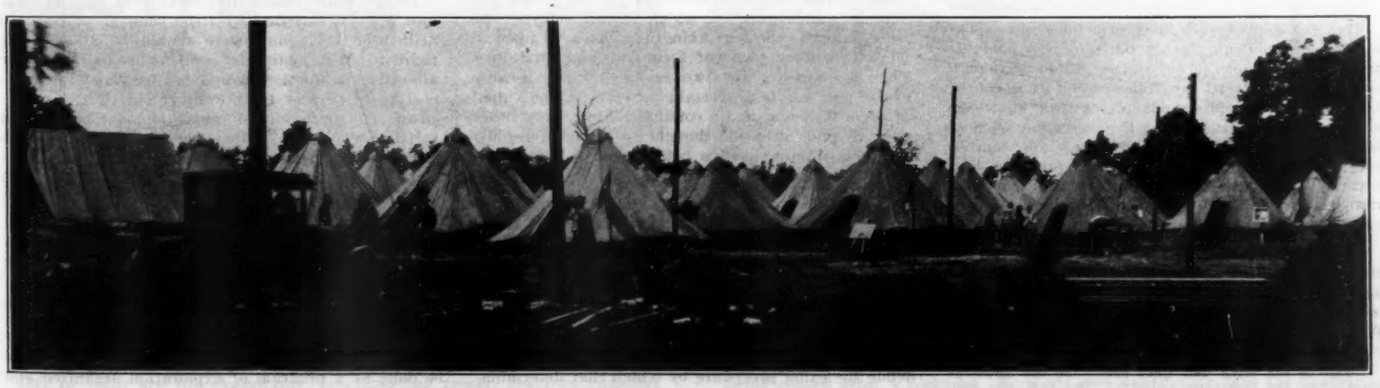
When the complete shutdown was first rumored for the district it was thought that such a movement would throw hundreds of men out of work in the field, but practically all of the companies have retained their personnel, and many of the smaller operators have done the same, giving men of their production department work to do around the camps and leases to keep them busy and on the pay roll. Two men were found hauling gravel on one of the larger company's leases, and joked about the demotion they had received "from the production department down to the highway department" of the company, but they were in high spirits due to the fact that the company had kept them on the pay roll.

Other production men are cleaning up the leases, stacking and overhauling equipment, painting tanks, and cleaning out lease storage as the oil is run from these tanks to market or to larger storage tanks. There are not as many slush pit fires burning around the fields, but several can be noted every day as bottoms of tanks are cleaned out and the waste burned in these pits. Such a shutdown is giving the formerly hard-pressed and fast working production department breathing time in which to take care of work that had been necessary, but shunted aside while drilling continued at the breakneck pace the last few months have witnessed.

Drilling Operations

Many locations were made during the past two weeks, and probably all of these locations would be drilled immediately but for the lack of fuel oil and gas from other wells which has been shut off by the wells shut in. No exceptions have been made to the order to shut in the

(Continued on Page 106)



Troops getting East Texas camp in proverbial apple pie order.

Methods of Applying Unit Operation

Legislation Needed to Correct Practices Started From Early Court Decision. Four Principles Emphasized

By Earl Oliver*
Prepared in Collaboration with W. P. Z. German, General Attorney, Skelly Oil Company, Tulsa.

The preceding articles of this series have discussed four certain principles that we believe must be incorporated into the law of oil and gas before efficiency, order and prosperity may be expected in the oil industry. This final article of the series will review ways and means by which those principles can be applied. Mr. German is absent on vacation and has had no opportunity to inspect this article in its final draft.

The four principles are:

1. That each landowner or his assigns shall be declared entitled to those proportions of the oil and gas in the common reservoir that underlie his land, and shall be protected in their enjoyment.

2. That the forces of expulsion native to the reservoir shall be declared common attributes of the reservoir, to be conserved to the common interest of its several owners and shall not be dissipated except as they are efficiently utilized in driving oil and gas from the reservoir rock to the point of extraction. When these forces have been so utilized then both the gas and the oil should be delivered to their respective owners.

3. That the state in its function of preventing waste of natural resources may require and prescribe efficient methods of exploiting oil and gas fields.

4. That during the periods of general overproduction the state, in order to prevent waste and/or to protect several owners as per Item 1 above, may determine from time to time the maximum amount of oil and gas that may be produced within the state and to that end shall have authority to limit the production in any pool to not exceed the market demand for oil therein.

Old Discussion Troublesome

Legislation to the full extent indicated would not be required except for the unfortunate precedent set by the Pennsylvania court in the early days of the petroleum industry when it initiated the right of capture as the means of acquiring ownership. It thus inadvertently started practices that violated long established legal principles which have stood the test of time in favor of a method that has ever been found destructive to permanent value—the law of capture. In the United States the owner of land has always been entitled to its mineral content; from time immemorial in civilized society the owner of property has been imposed with the duty of so using his property as not to injure the rights of another; and the right of the state to prevent waste of its natural resources is an inherent function of government.

Had the conflict with these principles been apparent when the Pennsylvania decision was made, or its results foreseen, it of course would have been overruled or at least not followed by other courts: but only through the growth of scientific knowledge respecting oil and gas during the succeeding 50 years has the extent of this conflict become apparent. In the meantime the resulting unsound practices have become so extensively fastened upon the industry that they cannot now readily be removed except through the enactment of legislation.

We have previously quoted John Stuart Mills to the effect that "a bad law or usage is not one bad act in the remote past, but a perpetual repetition of bad acts so long as the law or usage lasts. * * With the unwise practices of men as with the convulsions and disasters of nature, the longer they remain unrepaired the greater become the obstacles to repairing them, arising from the aftergrowths which would have to be torn up or broken through."

Need for Legislation

While perhaps courts would gradually but eventually correct this error, as they have attempted to do over the past 25 years when opportunity has been given, yet that process would require many years. The only practicable means of correcting it before the nation's petroleum resources have been hopelessly dissipated is to do so by legislation. That legislation to be effective should give to the oil industry the legal status it would have enjoyed had the Pennsylvania line of decisions not been initiated. It should make the laws of the oil industry harmonize with those of older industries whose legal status is the result of centuries of adjustment and represents the sum total of human experience on that subject. The principles we have set forth are an attempt to accomplish that end.

It is assumed if one state evolves a successful type of stabilizing legislation that other oil and gas producing states will gradually follow its lead. Needless to say, co-operation of that character is necessary to achieve results.

WIDESPREAD INTEREST IN SERIES

The series of articles prepared by Mr. Oliver and Mr. German on "Stabilizing the Petroleum Industry" has attracted attention throughout the petroleum world. The subject of unit operation is of paramount importance at this time. Governor Murray of Oklahoma states such a plan should be made effective in Oklahoma and he may insist that some much method of operation be used in that State. Arrangements have been made for placing two blocks of acreage in East Texas under unit operation as an experiment with the possibility that a major part of that vast area may be so operated if the plan succeeds on the two blocks and the method is not deemed as a violation of the antitrust laws of Texas. The Oil and Gas Journal has been the recipient of many letters commending this series of articles.

Too much emphasis cannot be placed on the injunction set forth in the initial article of this series to the effect that only broad general principles should be prescribed in the legislation, leaving details of procedure to administrative rules and regulations that can be changed as need for change becomes apparent. To do this will provide sound permanent standards along which the oil industry can be developed without fixing permanently upon it mere transitory ideas of technique and procedure. This is necessary for two reasons. First, because every pool is, to a certain extent, an individual problem differing in its condition from every other pool. Second, scientific thought is changing rapidly and new discoveries are being made constantly so that up to date methods of today will be regarded as obsolete tomorrow.

Details and Basic Principles

The most serious obstacle to sound proration in Oklahoma is an obscure clause in otherwise excellent conservation statutes passed 15 years ago. An apparent effort was made to give each owner the content of his acreage but the purpose was to some extent defeated by the tendency of the statute to define the exact procedure by which that determination shall be made. A similar experience of extensive detail making efficient administration difficult if not impossible is in prospect for those who will be called upon to administer the new Texas statute.

On the other hand the determination of important basic principles should not be left to the discretion of administrative agencies, since that would unduly subject the industry to the possibility of rapid changes of a nature that would make its values uncertain.

Perhaps a more immediate practical reason that general principles alone should be set out in the legislation is to simplify its enactment. If only broad general principles are proposed, applicable to any conceivable pool or set of circumstances and yet simple enough to be understood by every man and in harmony with the average man's idea of fundamental justice, public support could be more readily secured for it and its passage should not be difficult to procure; but when passed it will have set up a satisfactory standard by which relative rights and duties can be readily determined.

It is now well established that it is within the power of the legislature to lay down a general rule for the protection of the mineral rights of the owners of adjoining lands and to leave the details of enforcing that rule to an administrative agency or board. Such a board, however selected, would be permanent. Its members would be few in number and supported by technical advisers. It would have opportunity to hear and digest information in great detail and would for that reason be better equipped to formulate rules and regulations to put these principles into effect than would a large body of legislators with a great variety of problems to consider and limited time in which to consider them.

Acreage Limitation

As we have previously stated, the principle of apportioning oil and gas in a common pool among the several owners in proportion to the respective content of their several acreages can be accomplished in some measure through the simple expedient of determining the number of acres that should be allowed the full production of a single well. That acreage limitation should be adapted to the needs of each local pool and should be determined by the property owners in that pool acting collectively according to some procedure prescribed by the administrative agency of the state. If fractional units are drilled, in justice to other owners they should be permitted only a proportionate fractional production.

If for some reason the owners of any acreage unit are not satisfied with the showing of the well drilled on their unit they should be allowed the right to drill additional well or wells, but their allowable production should be restricted to a proportionate part of their total potential. This method of effecting equitable apportionment has proved satisfactory in the Yates Pool of Texas. It avoids the wasteful type of development that has characterized East Texas and Oklahoma City. If it had been applied to those pools much of the chaos they produced would not have been experienced.

A still more equitable and efficient method of development would result from organizing the entire pool into one operating unit so that the reservoir content could be taken out at any point on the structure most conducive to efficient extraction. This, however, would require determination of the relative acreage content of each owner, and should be done by a program of exploration organized and

(Continued on Page 29)

*Chairman A.I.M.E. Unit Operation Committee.
This is the sixth and final article of the series on "Stabilizing the Petroleum Industry." The first was published in The Oil and Gas Journal of July 23.

Associated Oil Co. Starts Operation of Largest Cracking Unit

* * * * * * * *

The Associated Oil Co. recently started the operation of its new 10,000-bbl. Tube and Tank cracking unit, the largest now in operation. Many new features were incorporated in its construction, including the use of a viscosity breaker and special safety devices.

The residuum to be cracked is pumped under high pressure into the viscosity breaker which is a furnace having between 6,000 and 7,000 square feet of heating surface and in which the fire box temperatures run as high as 1,200° F.

The purpose of the viscosity breaker is to break up the charging stock into gas oil to be charged to the high pressure cracking unit, and still leave a marketable cracked residuum. After passing through the viscosity breaker the pressure is reduced and the mixture passes to the evaporator.

In the evaporator, the vapors pass overhead and the residuum is drawn off as cracked fuel oil. The total vapors from the evaporator pass to the bubble tower where they are fractionated, permitting the small percentage of pressure distillate or cracked gasoline formed in this operation to pass on to the condenser as an overhead material.

The gas oil fraction, which forms 30 to 40 per cent of the fuel oil originally charged, accumulates in the bottom of the bubble tower from which it is then charged into the high-pressure cracking furnace.

From the cracking furnace the oil at high temperature and pressure discharges into the reaction chambers. The chambers provide the time element so the cracking reaction may be properly completed under the same high pressure. The reaction chambers discharge through controlled pressure reducing valves into the same evaporator as the viscosity breaker. Any additional fuel oil separated here passes out with the cracked fuel oil from the viscosity breaker.

The total intermingled vapors from the evaporator pass to the bubble tower where the gasoline is separated from the gas oil. They later return to the cracking furnace as recycle stock. The pressure distillate leaving the top of the fractionator as a vapor is condensed and separated from the gas formed in the process.

The wet gas passes through the absorption plant where the gasoline is taken from it and the dry gas returned for use as fuel under the boilers, viscosity breaker, and cracking furnace.

* * *

A new type of continuous treating plant has been built, in which the pressure distillate receives chemical treatment before being rerun in a two-stage atmospheric and vacuum rerun still. The gasoline from this rerunning operation, after further chemical wash, is then a finished product.

The safety of the plant is amply provided for. Should some condition arise which would necessitate the immediate shutting down of the plant, it is merely necessary for the operator in the control room to throw one switch. This automatically shuts down all operations and the oil in the unit flows out to a tower and tank situated at some distance from the plant. Here a system of water jets in the tower cools the incoming oil which is in turn flowed to a tank capable of holding all the oil in process in the cracking unit at that time.

It required 360 tons of structural steel and 100 tons of plate steel for the erection of the plant. The structural steel tower which carries the battery of heat exchangers is 108 feet high. The fractionating tower is 10 feet in diameter, 81 feet high and weighs 118 tons. The evaporator is 10 feet in diameter, 67 feet high and weighs 77 tons. The gas oil stripper weighs 22 tons.

Six carloads of tubes for use in the viscosity breaker and cracking furnace were used. One tube and its two return bends are worth over $1,000 each.

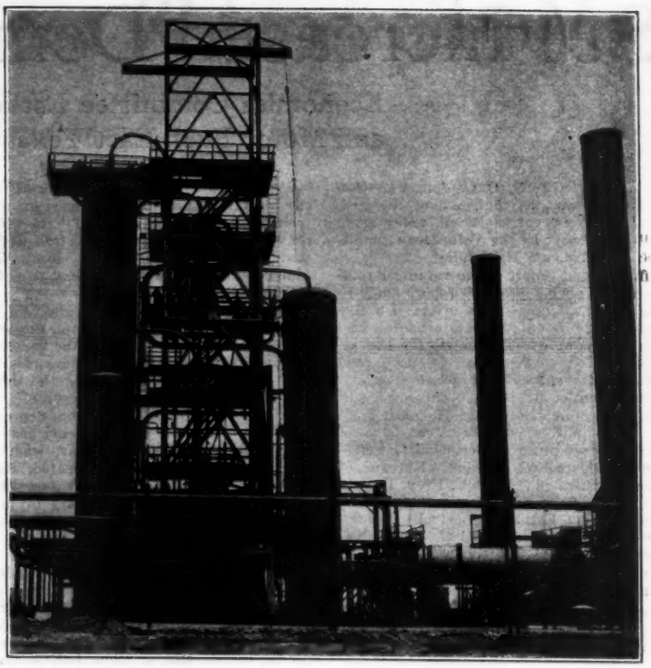
Perhaps the most outstanding feature of the cracking unit is the 125-ton reaction chambers. They are each 45 feet long by 6 feet in diameter, lined with concrete, the steel shell being 6 inches thick. The freight bill alone for each of these chambers amounted to $5,100.

The billet is first pierced and then forged on a mandrel successively until finished dimensions are reached without a single seam or joint.

In this manner the company expects to minimize corrosion of the metal and any wear or breaking away of the concrete will necessitate only a minor expense to replace it. The lining of cracking chambers with concrete has been made a general practice in those cases where corrosion is an important item in the maintenance of cracking equipment, but the use of a concrete lining here is of interest because of the fact high pressures and temperatures will be used in addition to operating the unit with a very large throughput.

As a result of the use of the more extreme operating conditions a motor fuel will be manufactured which will have a high octane number.

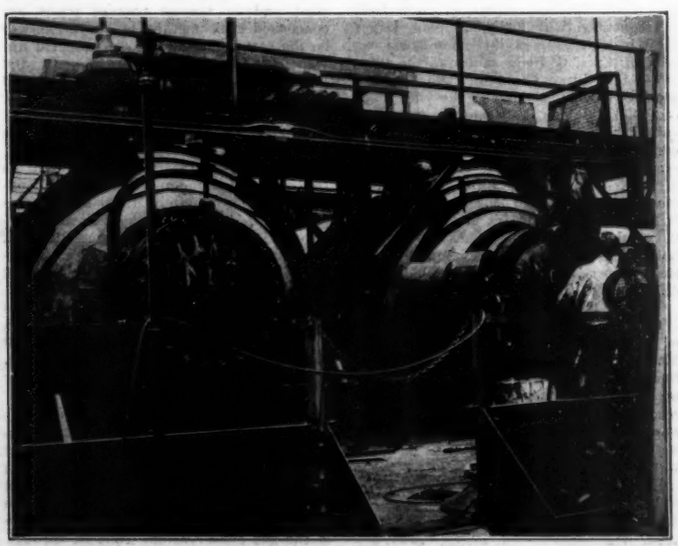
The operation of the cracking unit is under the supervision of William P. Hugo, general superintendent of the refinery, and J. H. Bedell, superintendent.



General view of the new 10,000-bbl. Tube and Tank cracking unit at the Avon, Calif., refinery of the Associated Oil Co.

* * * * * * * *

To the extreme left is shown the cracking furnace, and following from left to right are the evaporator, fractionating tower, reaction chamber and viscosity breaker.



Ends of the cracking chambers. To the right is shown No. 1 chamber being closed after a cleaning. Note the two ventilating fans for cooling and supplying the men with fresh air while working.

See Increased Demand for Rest of Year

Economics Committee Estimates 5 Per Cent Gain in Crude and Motor Fuel. East Texas Crude to West Indies Refineries

WASHINGTON, D. C., Aug. 24.—Secretary Wilbur, as chairman of the Federal Oil Conservation Board, today made public a report by the Volunteer Committee on Petroleum Economics.

This latest report of the volunteer committee reviews a previous report made to the oil board under date of April 6 last respecting the approximate crude oil and gasoline supply and demand for the period April 1 to September 30, 1931, and extends its surveys to include the last three months of the present year—the quarter ending December 31, 1931.

The volunteer committee consisted of E. B. Swanson, chief economist, Petroleum Economics Division, Bureau of Mines, chairman; John W. Frey, Bureau of Foreign and Domestic Commerce; Martin Van Couvering, petroleum engineer, Los Angeles; Alfred G. White, National Industrial Conference Board, New York City; and Howard Bennette, Western Petroleum Refiners Association.

Report in Detail

The report in detail is as follows:

In accordance with your recent invitation, the Volunteer Committee on Petroleum Economics has reviewed its report of April 6, 1931, which surveyed the approximate crude oil and gasoline supply and demand for the period April 1 to September 30, 1931, and has extended its survey to include the three subsequent months—the quarter ending December 31, 1931.

In its report of April 6, the committee anticipated a total motor fuel demand during the months of April, May and June of 119,732,000 bbls. Actual demand during this period proved to be 119,935,000 bbls. In other words, the committee estimated that motor fuel demand during the second quarter of 1931 would be 3.75 per cent less than in the corresponding period of 1930. Actually, the demand was 3.60 per cent less. During the third quarter, the committee anticipates an increase of 1.27 per cent in total motor fuel demand over the corresponding period of 1930 and for the final quarter of 1931 anticipates an increase of 5 per cent.

Motor fuel production during the second quarter was 2.08 per cent higher than calculated by the committee, resulting in the output of 2,290,000 bbls. more of motor fuel than anticipated. Imports of motor fuel added 369,000 bbls. more than estimated. The new supply of motor fuel, consequently, was 2,659,000 bbls. larger than provided for in the committee's report of April 6. In as much as the total motor fuel demand was only 203,000 bbls. greater than anticipated, the difference of 2,456,000 bbls. between the increased supply, 2,569,000 bbls., and the increased demand, 203,000 bbls. was added to, or remained in, the stocks of motor fuel held at refineries and plants. Motor fuel stocks, according to the program outlined in the committee's report of April 6, would have been reduced 6,385,000 bbls. from April 1 to July 1; actually, they were reduced by 3,929,000 bbls., the difference of 2,456,000 bbls. noted above.

June Almost Level

Operations during the first two months of the second quarter, but particularly in May, accounted for the situation outlined in the preceding paragraph. June operations, however, were closely in accord with the program outlined in the committee's report, as shown in the following table:

TABLE 1—MOTOR FUEL SUPPLY AND DEMAND, JUNE, 1931

	Committee's estimate of April 6 (bbls.)	Actual per Bureau of Mines (bbls.)
Production	36,874,000	37,024,000
Imports	1,106,000	964,000
Drawn from storage	3,794,000	3,652,000
Total supply	41,774,000	41,640,000
Total demand	41,774,000	41,640,000

Preliminary figures for July, based on the weekly reports of the American Petroleum Institute, indicate that withdrawals of motor fuel from storage the past month will approximate closely the committee's anticipated withdrawal of 5,292,000 bbls.

In the preparation of its analysis of probable supply and demand for the second half of the present year, the committee anticipates continued withdrawals of motor fuel from storage during the third quarter, stocks reaching a level of approximately 31,000,000 bbls. on September 30, 1931, and then increasing gradually until the close of the year, when a total of 35,238,000 bbls. is indicated. This latter figure is 5,303,000 bbls., or 13.1 per cent, less than the quantity of motor fuel held in storage at the close of 1930.

Refinery Production

Refinery production of gasoline during the second half of 1931 is calculated at 223,557,000 bbls., an increase of 8,808,000 bbls., or 4.1 per cent, over the production of 214,749,000 bbls. recorded during the second half of 1930. Information available to the committee indicates that motor fuel imports during the second half of the present year will total 8,231,000 bbls., a decline of 538,000 bbls., or 6.14 per cent, from the imports of 8,769,000 bbls. recorded during the second half of 1930. During the first four months of the second half, it is calculated that motor fuel imports will be 844,000 bbls., or 12.5 per cent, less than in the corresponding months of 1930, while during the last two months of the year, motor fuel imports will be 306,000 bbls., or 15 per cent higher than in the corresponding months of 1930. This indicates that the decline in motor fuel imports during November and December of the present year will be less marked than the rather sharp decline recorded at the close of 1930.

The refinery production of 223,557,000 bbls. will, according to the committee's calculation, require the processing of 462,315,000 bbls. of crude petroleum, an increase of 12,525,000 bbls., or 2.78 per cent over the refinery throughput of 449,790,000 bbls. during the second half of 1930. Of the 1931 throughput, it is estimated that 436,715,000 bbls. will be crude oil of domestic origin and 25,600,000 bbls. foreign crude oil. These calculations indicate an increase of 4.22 per cent in the quantity of domestic crude refined and a decrease of 16.76 per cent in the runs of foreign crude. Total crude oil demand, including exports, crude used as fuel and losses in handling, is estimated at 491,315,000 bbls., an increase of 13,486,000 bbls., or 2.82 per cent over the 1930 totals.

Withdrawals of Crude

To meet this indicated demand for crude petroleum, the committee anticipates that withdrawals of crude petroleum from storage will continue at a daily average rate of 75,000 bbls., the approximate average reduction which has been reported over the past several months, or a total during the second half of the year of 13,800,000 bbls. This withdrawal from storage is less by 2,791,000 bbls., or 16.82 per cent, than that recorded for the last six months of 1930.

Imports of foreign crude are estimated at 25,600,000 bbls., a decline of 5,399,000 bbls., or 17.42 per cent, from the corre-

(Continued on Page 31)

Humble Repressuring in East Texas

Systems Installed on Two Blocks to Conserve Gas, Maintain Sand Pressure and Recover Natural Gasoline

By Neil Williams

HOUSTON, Tex., Aug. 24.—A repressuring program which, for the present, will involve two large blocks in the East Texas Field, is being started by the Humble Oil & Refining Co. With the knowledge obtained by the successful operation of similar projects at the Sugarland and Raccoon Fields on the Gulf Coast and following a thorough study of conditions in East Texas, the company already is going ahead with the installation of permanent compressor plants in that field.

Two separate repressuring systems, one on each of the two blocks, are being put in simultaneously. With the exception of size they will be practically identical and so far as present plans are concerned their method of operation will be the same. The two blocks affected are what are known as the Bateman and the London blocks, the former located in the Kilgore district of northern Rusk County, and the latter between the Kilgore and Joiner areas, northeast of the new oil field town of London.

The larger of the two projects will be that on the London block, which consists of approximately 4,000 acres, comprising all or parts of the following surveys: Thomas J. Martin, Jose Ellington, John Smith, George Berry, Emma Melton, James Scott, Andrew Miller, Thomas A. Smith, Joe Cooper, J. M. Barton, G. W. Clough, W. H. Bears and Thomas Andrews (two surveys). The Bateman block consists of approximately 1,600 acres in the Ben Laird, Isaac Ruddle, William P. Chism, Elbridge G. Siever Surveys.

Serve Three-Fold Purpose

Repressuring of these blocks is expected to serve a three-fold purpose, chief of which is the conservation of gas through the return to the sand of all gas produced. The second purpose is to be attained as a natural consequence of the gas conservation. That is, through return of the gas to the sand, pressure in the sand is to be maintained to the extent that the flowing life of the wells will be prolonged, lifting costs minimized by the elimination of pumping, and water intrusion in the respective blocks restrained. The third purpose of the program is the recovery of natural gasoline. The latter is to be accomplished solely through the natural course of operations in the compression of the gas, making gasoline purely a by-product of the general program.

In connection with the recovery of gasoline from East Texas, the volume of gas is comparatively small, and, although the gasoline content is fairly high, plants designed with one of the main purposes the extraction of gasoline probably would be of the absorption or combination type. For the present, however, Humble Oil & Refining Co. will set up no absorption equipment and will have as its chief aim the development of its large blocks on a basis of production efficiency and conservation.

On the London block, the location of the repressuring plant will be located in the R. E. L. Silvey tract in the Thomas J. Martin Survey. This plant will have a daily compression capacity of 10,000,000 feet and will total 3,160 horsepower, consisting of seven 200-horsepower, and sixteen 100-horsepower units with one 160-horsepower auxiliary unit.

The plant on the Bateman block in the Kilgore district will be on the Ben Laird tract in the Isaac Ruddle Survey. This will have a daily capacity of 5,000,000 feet daily, consisting of four 80-horsepower and eight 160-horsepower units with one additional unit of 80 horsepower as an auxiliary, making a total of 1,680 horsepower.

Each installation will provide for a three-stage operation. In the first stage the gas will be taken at 12½-inch vacuum with a discharge at 35 pounds pressure. The second stage will boost the gas from 35 pounds to 300 pounds. The third stage will have a capacity to boost the gas from 300 pounds to 1,600 pounds.

Pressure of 1,600 Pounds

The 1,600-pound pressure capacity is being provided at each station although it is anticipated that the sand in each case will take the gas at slightly lower pressure, possibly at 1,200 pounds. This, however, is problematical as no actual tests have been performed.

As in the case of the Humble's Sugarland and Raccoon Bend Fields, the system will provide for the collection of casinghead gas from all the wells in each respective block, the extraction of the gasoline and the induction of the remaining dry gas back into the sand through key wells. So far the selection of key wells or the number of key wells has not been determined.

Under methods of development and production at Sugarland and Raccoon Bend, those fields have been held up to the industry as models of conservation and efficiency of operation. Both fields were proved up with a minimum of drilling and in each production has been restrained to far below the rated potential. By closing in entirely of high gas-oil ratio wells and by pinching back all others to the lowest figure consistent with efficient production the gas-oil ratio was lowered to less than 300 feet per barrel. With the installation repressuring programs at each field and returning the gas to the sand, the gas-oil ratio has been cut to well below 50 feet per barrel, the loss being that gas used for fuel as all the gas can be returned to the sand.

Development as far as possible on the two blocks in East Texas will be carried on as at Sugarland and Raccoon Bend. The Bateman block, however, is that on which the Kilgore discovery well was brought in early this year and has been the center of considerable drilling activity. A total of between 50 and 60 wells have been completed to date on it. The London block, on the other hand, has hardly been touched by the drill, comparatively speaking, with only 20 wells having been completed, these being necessary offsets along the edges as the Kilgore Field on the north spread southward to it and as the Joiner area spread northward to the southern boundary.

Refineries in the East Texas Fields

If Owners of These Plants Had Not Decided to Make Gasoline (?) They Probably Would Have Been Expert Producers

SINCLAIR CONSOLIDATED OIL CORPORATION
SINCLAIR OIL BUILDING
45 NASSAU STREET, NEW YORK

August 17th
1931

OFFICE OF THE
CHAIRMAN OF THE BOARD

1

Mr. Andrew M. Rowley, Managing Editor,
Oil & Gas Journal,
Tulsa, Oklahoma.

Dear Mr. Rowley:

If you have a humorous department you may want to use the two pictures enclosed. These are oil refineries. One of our men in Texas estimates that there are 200 installations of this kind in his state. The capacity of these plants usually runs from two to five barrels of gasoline and kerosene a day. The production is sold without any attempt to collect or report taxes.

Plant #1 has two of our light iron barrels for the crude supply. The still is a heavy steel drum covered with earth. The other container is for kerosene which flows by gravity to the underground pit beneath the still. You will notice that overhead is a line from the still which flows through a coil to an adjacent water barrel where the condensation is carried out. Different cuts in the run are established by taking a sample in a tomato can and touching off the distilled product with a match. If it burns, the product is gasoline; if it doesn't burn, it is kerosene.

The octane rating of the product of these stills is not reported.

2

With regards

Very truly yours,

Daniel T. Pierce

Assistant to the Chairman.

Much has been written about the inefficient and slipshod methods of producing crude oil in the East Texas fields by those who got into the business solely as a result of oil being discovered on their farms. Mr. Pierce shows the reason for the sputtering of many automobile engines trying to operate on some of the so-called gasoline produced in the East Texas area.

Profits Go Down If the Oil Truck Loafs

Distributors of Petroleum Products Suffer Losses in the Operation of Their Fleets Through Failure to Get Maximum Mileage

By Thomas F. Smiley

Increasing use of trucks in the distribution of oils and gasoline adds fresh importance to the minimizing of all forms of waste in this method of marketing. The work that a truck does must be measured in terms of load delivered and distance covered, that is, "gallon miles" or "pound miles." Increased gallonage or poundage means greater profit so long as the truck is not overloaded. Increased mileage, on the other hand, means higher cost for each gallon of product delivered. Getting work done economically therefore means getting a maximum volume of sales out of a minimum delivery mileage. Only when a truck is producing its maximum on this basis can it be said to be operated economically. Distributors of petroleum products for the most part operate their fleets of trucks under wasteful conditions for the reason that only a small percentage of the trucks are giving the work output of which they are capable.

Facts obtained by the General Motors Truck Co. in a nation-wide survey of distribution of petroleum products by truck are analyzed in a report[1] compiled by the company and remedies are offered for the various kinds of loss and waste revealed. How the work accomplishment of trucks may be increased is the subject of an interesting chapter in the company's report and the material presented in this article was obtained from that chapter.

One instance disclosing how owners of truck fleets fail to get the greatest possible amount of work from them is that of an Atlantic Coast distributor who, according to the survey report, has established an efficiency rating for his trucks based on miles covered, gallons delivered, number of stops, and the capacity of the truck. A standard of 100 per cent performance, based on the average performance, of his fleet for eight years, is used as a measuring stick on each type of delivery.

This operator has found, by careful application of this efficiency rating, that his trucks develop from 130 to 140 per cent normal efficiency during rush seasons, even when overtime is excluded from his calculations. And, on the other hand, the average of his fleet during off seasons for each product handled is only about 50 to 60 per cent. Such a tremendous variation in operating efficiency as is shown by these figures indicates clearly that there is much waste effort and that trucks and drivers are not producing their maximum work output a large portion of the time.

There are three common sources of low work efficiency in the average distributor's truck operation, each of which should be the subject of careful study with a view to eliminating losses and increasing the work output of each truck in operation. They are: (1) The demand for underload deliveries; (2) fluctuations in sales volume, and (3) uneconomical sales direction. Each of these losses, of course, involves loss of time as well as loss of work, but they arise largely from the distribution of the work to be accomplished by the trucks rather than from careless or inefficient use of time. Let us see what the distributor can do to reduce truck operating losses from these three sources.

Every time a truck leaves the distributor's station with less than its capacity load of products to be delivered the distributor is making less than a full profit on the trip. Underload deliveries cannot be eliminated entirely so long as special deliveries, demands for extra service, and fluctuations in volume occur. But many distributors seem to make little or no effort to lower the number of less-than-capacity loads delivered, with the result that their average loads, day in and day out, sometimes fall as low as 60 per cent of full capacity.

Better Supervision of Dispatch Needed

For the most part, excessive losses from underload deliveries arise solely from lack of careful supervision and direction in dispatching trucks. A customer calls in, demands immediate delivery of 50 gallons

(Continued on Page 69)

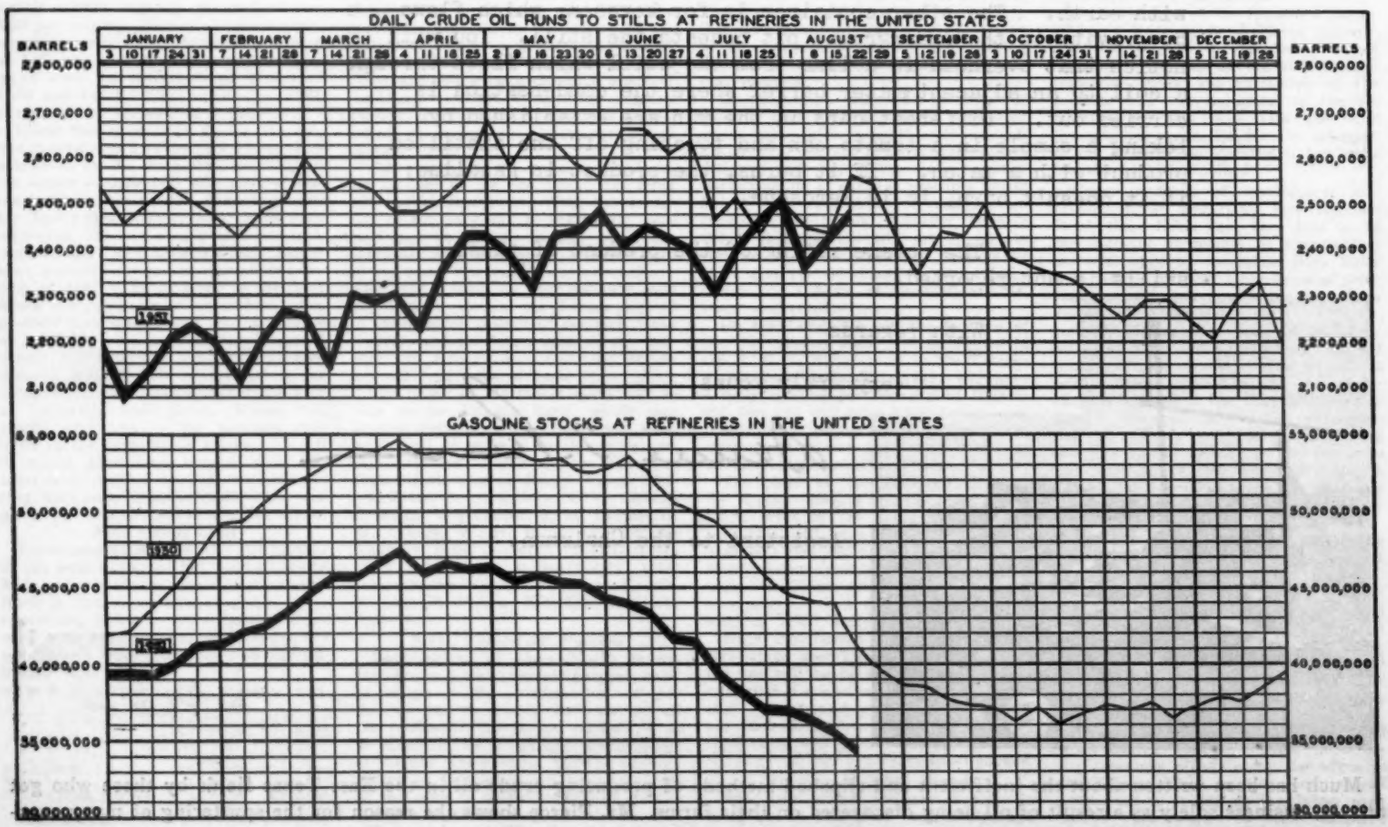
[1] This copyrighted report, presented in a 24-page booklet entitled "Delivering Oils and Gasolines Profitably," may be obtained upon request from the General Motors Truck Co., Pontiac, Mich.

AMERICAN PETROLEUM INSTITUTE WEEKLY REFINERY STATISTICS

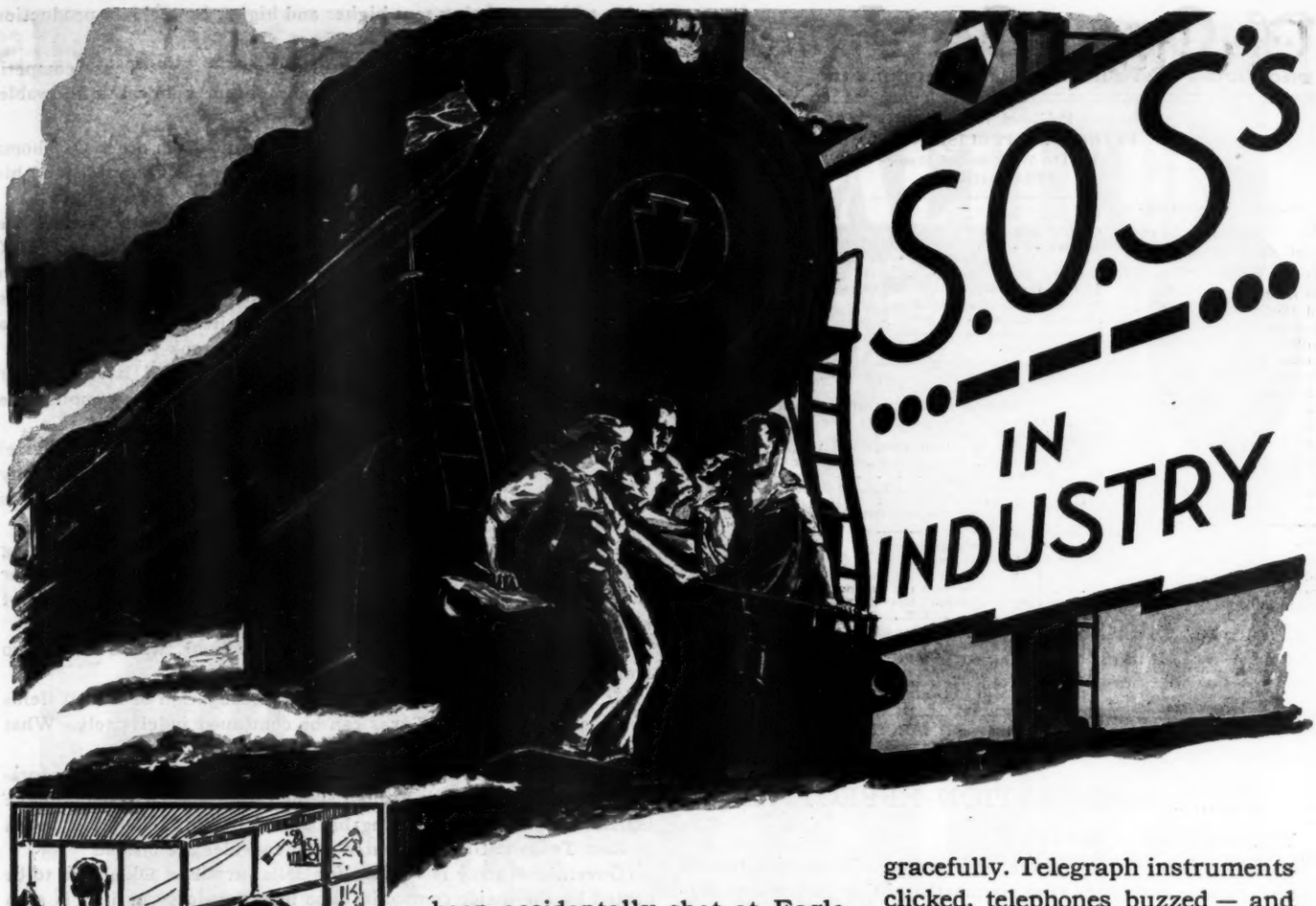
The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to still, gasoline stocks and gas and fuel oil stocks in barrels—for the week ending August 22.

	Week ending August 22, 1931				Week ending August 15				Week ending August 23, 1930			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	447,300	5,036,000	10,959,000	100.0	477,000	5,335,000	10,974,000	100	512,600	5,555,000	10,632,000
Appalachian	91.8	111,400	1,271,000	1,470,000	91.8	108,400	1,299,000	1,467,000	91.8	89,400	1,324,000	1,014,000
Indiana, Illinois, Kentucky	98.9	333,400	5,169,000	4,280,000	98.9	351,300	5,257,000	4,263,000	99.6	302,300	6,356,000	4,408,000
Oklahoma, Kansas, Missouri	89.6	308,300	2,477,000	5,167,000	89.6	296,400	2,399,000	5,038,000	89.3	258,600	3,157,000	4,086,000
Texas	91.3	537,100	6,587,000	11,317,000	91.3	538,600	6,450,000	11,178,000	90.4	583,600	6,169,000	10,439,000
Louisiana and Arkansas	98.9	185,000	797,000	3,224,000	98.9	195,000	797,000	3,141,000	96.8	167,700	1,356,000	1,848,000
Rocky Mountain	89.3	57,300	1,224,000	821,000	89.3	53,900	1,295,000	825,000	93.6	63,600	2,141,000	1,212,000
California	96.5	475,600	11,437,000	97,567,000	96.5	476,100	11,652,000	97,974,000	99.3	573,300	13,784,000	105,562,000
Total United States	95.0	2,458,400	34,068,000	134,805,000	95.0	2,496,700	34,534,000	134,860,000	95.6	2,551,600	39,842,000	139,192,000
Texas Gulf Coast	99.8	405,100	5,472,000	7,991,000	99.8	409,400	5,356,000	7,771,000	100	442,900	4,927,000	7,524,000
Louisiana Gulf Coast	100.0	124,200	595,000	2,152,000	100.0	122,700	684,000	2,076,000	100	115,700	1,043,000	1,097,000

(1) Per cent refinery capacity represented. (2) Daily crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.



Data for 1931 based on weekly reports of the American Petroleum Institute. Figures for last week not shown in graph but are included in above tables.



A SHORT TIME ago, an ambulance was noticed waiting near the Pennsylvania Railroad tracks just outside of Oil City. It was learned from the inevitable crowd, that always seems to spring right out of the ground around an ambulance, that a man had been accidentally shot at Eagle Rock, a little settlement about six miles up the river.

The above is not news. It was told before in our local paper. But the point that impressed us, and which was not brought out in the newspaper accounts, was the fact that the Pennsylvania Railroad dispatched a yard engine to Eagle Rock immediately to bring the man to the ambulance. They didn't stop to inquire if the man owned a refinery or a Packard or whether he belonged to the Odd Fellows, Knights of Columbus or the Masons.

An emergency existed and the Pennsylvania Railroad met it gracefully. Telegraph instruments clicked, telephones buzzed — and semaphores dropped as that mighty yard engine tore out of the yards on to the main line toward Eagle Rock on its errand of mercy.

There are emergencies in the oil business also. A refinery burns, a still explodes, an ill adapted pump blows up, or a serious breakdown threatens to shut down a pipe line. In such events, everything we have is yours, day and night — a large stock of pumps, manufacturing and repair facilities and shipping facilities to make speedy deliveries.

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MAKING PRORATION EFFECTIVE

Who said proration had failed?

The Government's Committee on Petroleum Economics reports that production during the first six months of this year was 45,000,000 barrels less than in the same period the previous year.

California cut its production 23,000,000 barrels; Oklahoma, 16,500,000; West Texas, 16,000,000; the Gulf Coast, 5,000,000, and the rest of Texas outside East Texas 10,000,000 barrels.

These were the areas where proration was given a chance.

On the contrary, in East Texas where proration was flouted and the State's efforts at restriction were defied there was an increase of 31,000,000 barrels.

The industry would be happy today to have dollar oil. But oil did not drop below a dollar until unprorated East Texas flooded the market with crude that sold all the way down to 2½ cents a barrel.

And what is the hope of the industry today for dollar oil? The closing down of East Texas until it accepts proration.

If East Texas had adopted proration we would never have had to pray for dollar oil or to think of it as the mark of oil prosperity.

The advocates of proration, of curtailment of production to meet the demand, were everlastingly right, but it seems to have taken military occupation of the oil fields of East Texas to prove it to those who would not listen to facts.

Lots of people will tell you that Governor Murray's forcible shutdown in Oklahoma until oil reaches a dollar a barrel forced up the price. But if Governor Sterling had not clamped down East Texas, Oklahoma oil men would have been drowned in cheap East Texas oil while waiting for a dollar a barrel for Oklahoma crude.

Foredoomed to failure as a lone effort to fix the price of oil by executive order, Governor Murray's example nevertheless paved the way for Governor Sterling to act where action counted. For the moment the industry is grateful to them both, but it will be fortunate if it never has cause to regret their interference.

When Governor Murray issued his order, Oklahoma, under proration, had an allowable production of 550,000 barrels daily and was not making that much in an effort to keep down national production which was being sent higher and higher by reckless production in East Texas.

Oklahoma producers, seeing prices cut by East Texas competition, were voluntarily reducing their output below the allowable, in the hope of saving prices.

In fact when the governor issued his shut-down order Oklahoma production was already 126,000 barrels below the allowable, and his order shut in only 160,000 barrels more.

Oklahoma production was therefore 286,000 barrels below the allowable, while at the same time East Texas was producing 625,000 barrels daily when the Murray order was issued and, in the last full week before Governor Sterling closed down the district, was producing 738,000 barrels a day, capping its output with over a million barrels on the day before the troops took possession.

Needless to ask what chance Oklahoma would have had for dollar crude with that tidal wave from East Texas swamping the industry everywhere.

The average price of that East Texas oil was 14 cents a barrel and 36 cents brought it to Oklahoma markets, or less if the company buying it had its own pipe lines. What would 50-cent East Texas oil laid down in Oklahoma do to dollar Oklahoma oil?

Now, thanks to Governor Sterling's shutdown, prices are being restored and 68 cents for East Texas crude makes it over a dollar in Oklahoma, and dollar Oklahoma oil is justified by the law of supply and demand, not by order of the governor.

This brings us to the question of the hour, where do we go from here?

It is hardly conceivable that military occupation of the oil fields of Oklahoma and East Texas can be continued indefinitely. What will happen when the troops are withdrawn?

The Texas Railroad Commission will announce its new proration rules under the law enacted at the recent special session of the legislature. Governor Sterling has stated he will retain the troops in East Texas until it is assured the new rules are obeyed.

Governor Murray is waiting for dollar crude in Oklahoma to be posted by the major companies who may not do so until it is seen whether results in East Texas will justify confidence in the adjustment there.

There are still obstinate opponents of regulation in East Texas. They may wait until the troops are withdrawn to rebel and force the test to court. But, unless they are blind to all reason and their own self interest, they will heed the demonstration of the past few weeks that proration is best for everybody.

They have only to look at the 340,000 barrels produced on May 1 which brought $214,000 and contrast that with the 654,000 barrels produced August 5 which brought only $100,000.

Today East Texas can get twice as much for half as much oil as before the shutdown.

Even the most rabid opponent of proration may well pause long enough to ask himself what he has lost by reckless production.

They were warned that instead of enriching themselves by hurrying production they were robbing themselves.

If the objectors in East Texas could disabuse their minds of the hobgoblins that infest them and get down to a common sense examination of the oil business it would not require martial law to keep them from wasting their oil.

Surely, if regulation of production was not in the interest of the producers it would never have been accepted in Oklahoma, West Texas, California and Kansas. Balking East Texas producers have no reason to assume that they are smarter than their fellow producers everywhere else. The fact that the price structure was maintained on a living basis as long as it was before East Texas broke the market is the best testimonial that proration was right. The fact that East Texans' refusal to adopt proration broke the market is the best proof that it was wrong. The fact that the market immediately improved when waste in East Texas was checked is a clear demonstration of cause and effect.

Unless East Texas is deaf to all evidence and reason no troops should be needed to keep production there within the limits set by the new order of the state commission.

Here is another example of how Dresser Couplings speed up difficult laying jobs. This 208-mile 18-inch gas line went from Louisiana to Memphis in 92 days — across fields, gumbo, swamps, rivers, railroads, canals, ditches and bayous. Dressers are standard for long-distance lines because they make the quickest, tightest and most flexible joints—least expensive to maintain. They remain permanently tight.

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DRESSER COUPLINGS DOMINATE

Deacidification of Lubricating Stocks

Filtration After Acid Treatment Results in Increased Capacity, Saving in Chemicals and Better Quality Stocks

By Howard A. Young

The complete and immediate removal of polymerization products, following acid treatment, presents an outstanding difficulty in the refining process.

For many years it has been general practice to effect a rough separation by settling. So serious is the problem that nearly all refiners, consciously or not, overtreat their stocks. This is not intended to mean necessarily the use of too much acid but rather too long a time of contact between sludge and oil.

General use of settling tanks tends to defeat the purpose of acid treating. Long periods of detention permit re-solution in the treated oil of some polymerized products. This is a natural consequence of the nonsettling character of pepper sludge inducing the refiner to exceed the optimum time factor for best quality and yield of finished oil. Besides large storage capacity and the great volume of oil required to be in process, settling has the further disadvantage of unavoidable oil losses.

A somewhat remedial step is the use of precipitating agents and it may be pertinent to state that this procedure and that of contact bleaching are said to have been standard European practice for the last 20 years. In some cases water or alkali are used to accelerate sludge separation. Another widespread application is the use of finely divided solids, preferably applied in the agitators immediately after treatment. Predominant in this group are ground silica, fuller's earth, kieselguhr, and various clays which serve to adsorb, entangle, and coagulate the fine sludge, carrying it down with the blanketing effect of rapidly settling particles.

While this method is unquestionably an improvement, the separation is far from being complete or immediate, and costs must be closely watched. Some results are tabulated in Table 1.

The utility of the centrifuge also has been investigated and centrifugation has been employed on a few products of very low gravity and, in several isolated instances, upon a relatively small scale for neutrals. The necessity of bringing up to speed the oil entering a bowl rotating between 5,000 and 20,000 r.p.m. results in a violent churning action which tends toward further subdivision of the sludge particles and emulsification in the presence of water. Particles of small mass, and gravity approaching that of the oil, resist separation at practical bowl throughput.

Centrifuging has proven least satisfactory where acid and oil have been vigorously agitated, where the acid concentration exceeds 96 per cent, and when the slightest amount of cracking occurs during distillation. Oil losses in sludge discharge, the question of sludge discharge itself, bowl corrosion, fire hazard, and lack of uniformity in performance demand further scrutiny. Best results should be obtained by using agitators designed to produce sludge particles of sufficient mass to permit easy separation. This has not had a practical solution and performance of commercial effectiveness and warrantable installation and operating costs remain to be demonstrated.

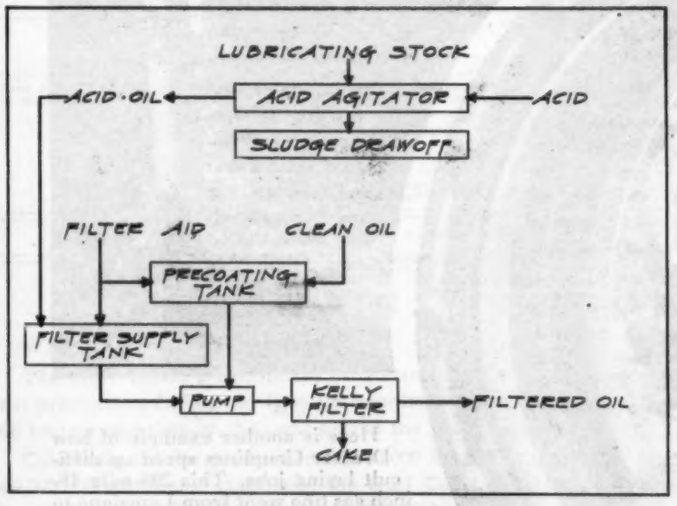

Figure 1—Flow sheet for filtration of acid oil.

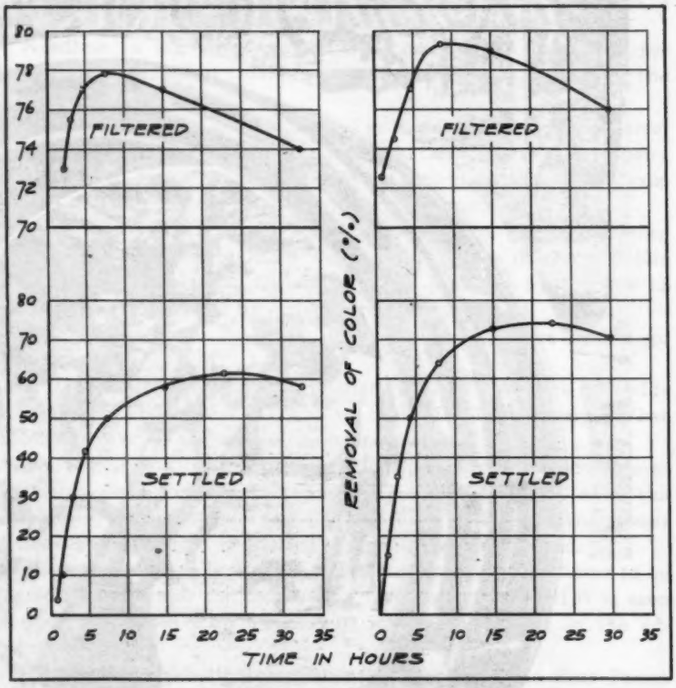

Figure 2—Actual and apparent color removal in settling process.

Process

The unsatisfactory nature of current methods of sludge separation stimulated the development of filtration technique which is so positive in action as to remove completely the acid pepper at any time after treatment has been consummated and regardless of the intimacy of contact between acid and oil.

It should be stated that the writer favors acid treating at a low predetermined temperature, depending upon the effectiveness of the treat and filterability of the treated oil. An increase in temperature to facilitate sludge removal will cause oil losses and produce additional color and sulphonic acids. The agitator should permit continuous withdrawal of the treated oil by means of a swing ell, valves at regular intervals in the vertical plane or some other suitable device. Mechanical agitation, although perhaps more costly than other methods, is decidedly better. It is well, for a tank of given shape and dimensions, to determine the proper propeller pitch and projection as well as the optimum movement of liquid along the tank periphery.

These are points which will improve performance but, regardless of how the agitation may be conducted, filtration will give good results. It has been found best to provide a short preliminary settling period because our findings show

(Continued on Page 64)

TABLE 1

Viscosity Saybolt Universal 130° F.	Sulphuric acid per cent weight	Precipitating agent	Neutralization No. (mg. KOH per gm. oil) for settling time in hours: 0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0	8.0
155	6	None	...	...	9.33	...	6.76	...	5.15	...	4.96	...	...	...	...
155	6	Fuller's Earth	...	...	4.99	...	3.41	...	3.08	...	3.03	...	...	...	...
220	8	None	43	20	16	...	13.5	...	...	...	...	...	10.6	...	...
220	8	Soda	8.32	...	6.58	...	5.29	...	4.39	...	...	...	4.06	...	...
220	8	Kieselguhr	7.20	...	5.60	...	4.32	...	3.86	...	...	...	3.19	...	...
480	6	None	32.9	...	18.9	...	7.56	...	...	5.80	5.47	...	...	...	5.45
480	6	Fuller's Earth	8.6	...	6.7	...	5.1	...	...	...	4.39	...	...	...	4.30

TABLE 2

Viscosity in Saybolt Universal at 130° F.	Acid on oil per cent	Precipitating agent used in settling	Prior settling period hours	Filter aid per cent	Maximum final pressure lbs./sq. in.	Flow rate bbls. per sq. ft./day*	Neutralization number mg. KOH per gm. oil: Before	After	Finishing earth type per cent	Reduction in acidity per cent	Reduction of of earth per cent	Color final oil Robinson
155	6	Kieselguhr	16.0	...	....	....	....	....	Tonsil 6	....	..	10.9
155	6	Kieselguhr	4.0	0.2	35	7.13	3.08	0.67	Tonsil 3	78.0	50	11.1
190	8	None	16.0	...	....	....	....	....	Terrana 3	....	..	6.0
190	8	None	3.0	0.4	50	2.48	15.3	1.20	Terrana 3	92.4	62	6.0
220	6	Kieselguhr	36.0	...	....	....	....	....	Tonsil 5	....	..	9.5
220	6	Kieselguhr	5.0	0.5	50	4.57	3.62	0.84	Tonsil 2	77.8	60	10.2
310	9	None	17.0	...	....	....	....	....	Montana 5	....	..	8.0
310	9	None	5.0	0.5	35	2.33	2.50	0.72	Montana 3	75.2	40	8.5
480	6	Fuller's Earth	48.0	...	....	....	....	....	Tonsil 9	....	..	7.0
480	6	Fuller's Earth	5.0	1.0	50	1.51	4.38	1.29	Tonsil 4	71.1	44	7.0

*42-gallon barrels.

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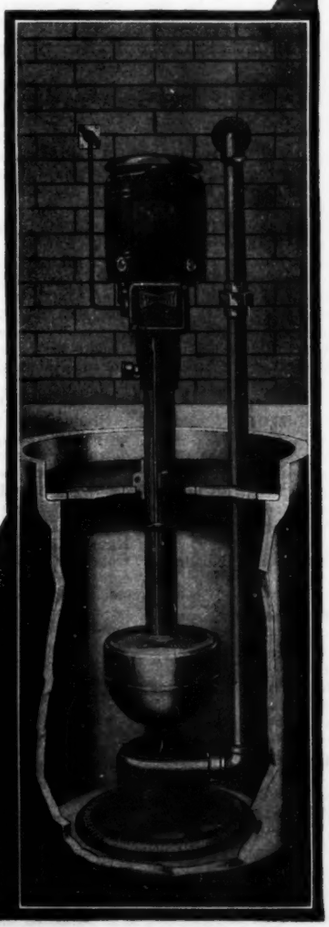
Penberthy Pumps are carried in stock by leading jobbers throughout the country. Write us for capacities, specifications and installation drawings . . or see your plumbing contractor.



PENBERTHY INJECTOR COMPANY

Proration Hearing Begins at Austin

E. V. Foran First Expert Heard. Long List of Witnesses Seeks to Be Allowed to Air Views

By Special Correspondent

AUSTIN, Tex., Aug. 25.—E. V. Foran, technical adviser to the former central proration committee, was on the stand until late in the day Tuesday as the first witness of the Texas Railroad Commission's hearing August 25 on rules to put into effect the new oil and gas conservation law and pipe line law in the East Texas Field which has been shut down completely for nine days under martial law. The hearing was held the earliest day possible under the 10 days' notice required in the new conservation law.

In calling the meeting to order Chairman C. V. Terrell of the Railroad Commission explained briefly the new conservation law as published in full text by The Oil and Gas Journal last week. He said the commission is forbidden to consider anything but physical waste in the production, transportation and storage of oil in dealing with gas production.

"All persons will kindly refrain from discussing the merits of martial law," he ruled.

Chairman Terrell told M. S. Church, attorney for the central proration committee, that the commission could recognize him to put on Mr. Foran's testimony as an "interested individual." But that it considered the central proration committee "has been disposed of" by the new law.

Mr. Foran testified his belief that only about 35 per cent of the East Texas Field has been fully drilled so far; that the field is showing effects of water infusion, and that orderly drilling over the field generally is better than intensified drilling in any particular area. He repeated a discussion of the geology of the field that he has made repeatedly before the Railroad Commission and the legislature during earlier hearings and the legislative inquiry of the recent special session.

Increased recovery by orderly production will range from 30 to 100 per cent of the amount otherwise recoverable, he testified. Mr. Foran was placed under an extensive cross-examination by W. Dewey Lawrence, attorney for a committee of the East Texas Lease, Royalty and Landowners Association.

Suggests 250,000-Bbl. Limit

A daily production limit below 325,000 bbls., preferably about 250,000 bbls., was urged for the entire East Texas Field to avoid waste and secure the greatest ultimate recovery by Mr. Foran. He said the allowable should be revised and readjusted periodically.

The Railroad Commission announced it was without a prepared set of rules proposed to govern the field, and Attorney Church said the central committee will offer no recommendations.

The first day of the hearing left unanswered the question as to how long martial law will remain in the East Texas Field and how long the field will be kept completely shut down. Rules for operating the field are to be written in the light of testimony taken at this hearing.

Governor Holds Conferences

Governor Ross S. Sterling has held conferences with members of the Railroad Commission, presumably upon the question of substituting regulation by the commission for martial law, and through permitting the reopening of the field.

About one-fifth of those present entered formal appearance at the hearing to be in position to take part in testimony or questioning. Among those participating were former Gov. Dan Moody, Austin; Senator Tom Pollard, Carl Estes, Tyler; J. Lewis Thompson, Houston: J. S. Bridwell, Wichita Falls; W. A. Vinson, David Proctor, Ben C. Belt, E. A. Berry, Joe S. Brown, Houston; J. P. Parten, Shreveport, La.; J. M. Siman, Fort Worth; W. L. Todd, Dallas; Charles F. Roeser, Fort Worth; L. R. Cullum, Wichita Falls; Paul Wagner, Houston; Robert R. Penn, Dallas; M. S. Church, Dallas; George Sawtelle, Houston; C. P. McGaha, Wichita Falls; Joe Danciger, Fort Worth; Sam M. McCorkle, Mexia; W. Dewey Lawrence, Tyler; S. A. Guiberson, Jr., Dallas; J. D. Parnell, Wichita Falls; Joe W. Olney, El Dorado; W. B. Sutton, Houston: C. V. Millikan, Tulsa; E. V. Foran, Fort Worth; C. A. Andrade, 3d, Dallas; J. C. Wynne, Wichita Falls; N. T. Gilbert, Austin; R. R. Thompson, Fort Worth; W. C. Whitford, Tulsa; J. R. McWilliams, Tulsa; D. R. Snow, Tulsa; C. E. Beecher, Bartlesville, Okla.; G. F. Crutchfield, Albany; R. R. Kyner, McCamey; Don Emery, Amarillo; J. S. Rushing, El Dorado; J. H. Clark, Amarillo; E. A. Landreth, Fort Worth; Gage Lund, Tyler; R. H. Morrison, Tyler: R. E. Hardwicke, Fort Worth; C. W. Beecher, Bartlesville; R. L. Batts, C. L. Black, Austin; Senator W. K. Hopkins, Gonzales; R. L. Benoti, Shreveport, La.

The oil field umpires that had been paid by the companies to administer proration are "out" so far as any official status is concerned, officials of the Railroad Commission announced. The umpires in each field have been notified they no longer represent the commission.

The commission probably will not take any of them over as umpires after its hearing on administering the new law, officials said. The entire state regulation is to be administered through the oil and gas supervisors. Some of the supervisors may be given low-salaried assistants, it was said.

SINCLAIR-PRAIRIE MERGER

NEW YORK, Aug. 25.—Dow Jones & Co. says: "Officials of Sinclair Consolidated Oil Corp., Prairie Oil & Gas and Prairie Pipe Line companies have agreed upon terms for merger of these companies to be submitted to directors of the several companies. The terms are, one share of the new holding company stock for each share of Sinclair common, one share for each share of Prairie Oil & Gas and 14 shares for each 10 shares of Prairie Pipe Line stock. The name of the new company will be Commonwealth Petroleum Corp."

Sinclair headquarters here say no statement has been made.

MAGNETIC STORM

Tucson, Ariz., observatory of the U. S. Coast and Geodetic Survey report a moderate magnetic storm started at 1 p.m. (C.S.T.) on August 24 and still continues at time of going to press. The telegram follows:

"Storm began twenty-fourth. Nineteen. Moderate."

L. E. PHILLIPS ILL

L. E. Phillips, vice president of the Phillips Petroleum Co., was stricken with acute indigestion in Bartlesville Saturday, but on Tuesday it was reported that he was out of danger.

KISTLER TO REITER FOSTER

Frank E. Kistler, organizer of Producers & Refiners Corp., has been elected chairman of Reiter Foster Oil Corp.

Late Fields

SOUTHWEST TEXAS

SAN ANTONIO, Tex., Aug. 25.—Stanolind Oil & Gas Co.'s No. 1 Stratton in southwestern Nueces County, 6 miles south of the Agua Dulce gas field, in sand at 4,746-52 feet tested 200 pounds and looks like a gas well. Casing is being set. The test has previously been carried as Southern Crude Oil Purchasing Co.'s No. 1 Stratton. Production in the Agua Dulce Field is in a sand at approximately 2,000 feet, though the Houston Oil Co. has one oil well a mile east of the 2,000-foot gas production producing at total depth of 4,913 feet.

OKLAHOMA

In the extreme north end of the Oklahoma City Field, Westgate Oil Co. and Continental Oil Co.'s No. 3 Carey, SW cor. SE NW, Section 34-12-3w, is flowing at the rate of 90,000 bbls. a day. It has flowed a total of 18,718 bbls. of oil in 5 hours and 22 minutes since it was completed. Each new well is allowed eight hours initial flow.

Producers in the Oklahoma City Field have been taking advantage of the shutdown to improve their lease equipment. New connections have been installed, separators repaired, and a number of new tanks have been erected.

The State's deepest drilling test is Mid-Kansas Oil & Gas Co. and Ramsey Petroleum Co.'s No. 6 Preston-Culp, NW cor. NE, Section 6-5-9w, on the west side of the Cement Field, in Caddo County. It was drilling at 9,380 feet in sandy lime where the owners believe a showing of gas was found. A brown lime was found from 9,355-68 feet. The test was being drilled deeper in a 9-inch hole with rotary tools.

In Pontotoc County, H. M. Drilling Co.'s No. 1 Pierce, CNL NW SE, Section 16-5-8, found a showing of oil and gas. The gas was estimated at 500,000 feet from 400-50 feet. A showing of oil was found at 570 feet and a hole full of water at 650 feet. The test was drilling deeper at 900 feet.

In the Kingston area of Marshall County, McCrory and McCrory's No. 1 Little, SW cor. NW SW, Section 30-7s-6, pumped 150 bbls. of oil in 37 hours and it is estimated the water was 50 per cent. The oil was found in sand at a total depth of 497 feet.

Several tests in the Oklahoma City Field are expected to be completed in a few days. Tom Slick Oil Co.'s No. 1 Long, SW cor. NW SE, Section 15-11-3w, was making connections to complete at a total depth of 6,515 feet. The casing was landed at 6,417 feet. Same company's No. 3 Central, SE cor., Section 3-11-3w, was preparing to bail after drilling sand from 6,335-6,552 feet. It was given a production test about two weeks ago and showed only a small amount of oil and gas. It was reconditioned.

Marco Oil & Royalty Co.'s No. 1 in Section 6-1-2, Murray County, is a new location. It is one of the few wildcat locations to be announced during the last few months.

The production from the Oklahoma City Field on August 25, was 5,175 bbls.

(Continued on Page 112)

High Spots in Field News

OKLAHOMA

New wildcat test announced in Murray County. Well completed in Oklahoma City estimated 90,000 bbls.

CALIFORNIA

Kettleman Hills alone out of line in production. Producers Sales Agency becoming an increasing factor on Coast.

EAST TEXAS

Storage oil being drained. Race to stake locations before flush production is dissipated. Wells now number 1,700.

GULF COAST

Improvement in Coastal district. More oil must be obtained by new drilling. New operations already under way.

SOUTHWEST TEXAS

Two completions in Saxet Field, both big gas producers along with oil. Camp well may extend Darst Creek Field.

ROCKY MOUNTAIN AREA

New operations in Dry Creek Dome. Seven completions in Cut Bank. Higher price asked in New Mexico by governor.

WEST TEXAS

Schleicher County test shows no increase in oil but to be drilled deeper. Important wildcat location in western Crane County.

KANSAS

Forty-two chat wells and two Viola wells in Ritz-Canton Pool allowed 50 bbls. each per day, limiting pool to 2,200 bbls. daily.

NORTH LOUISIANA-ARKANSAS-MISSISSIPPI

More activity in Claiborne Parish. Sugar Creek proved as gas field and oil expected. Deep tests in Smackover and Mississippi.

East Texas Storage Is Being Drained

Race to Stake Locations and Drill Before Pressures Are Dissipated. Oil Producers Sales Agency Gets Under Way

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Aug. 24.—Five days after martial law was declared in East Texas, covering all producing wells, and completely shutting them in, the Magnolia Petroleum Co. boosted the posted price from 20 cents per barrel to 68 cents, thereby giving some proof that a complete shutdown had had its desired effect. However, there is but little oil in the field to be sold at this time, but few independent operators and small companies having any in steel storage to let go at this price even though the Magnolia Petroleum Co. desired to purchase it, therefore the posting at this time seems to be only a gesture. Sun Oil Co. met the advance this morning.

When the shutdown went into effect at 7:16 a. m., August 17, there was around 3,500,000 bbls. of oil in storage in the district, but several of the purchasing companies which have trunk lines out of the district have been running oil since the shutdown, and it is expected that the amount of storage in the field has been cut to around 2,000,000 bbls. at the present time, this amount probably being drained out of lease and farm storage before a new curtailment order is issued and the wells opened to production under some allocated daily average.

One production report carried an average of 847,865 bbls. per day for week ending August 19, while another report covering the same period stated that there was 855,160 bbls. produced daily, some pipe line men stating that all runs had not been reported, and production had not been completely reported. On Saturday, August 15, there was around 900,000 bbls. produced, and on Sunday, August 16, the day before martial law was declared, one report stated that around 1,200,000 bbls. had been produced in the entire district.

Pipe Line Runs

Pipe line runs averaged better than 512,000 bbls. during the last six days, and there was around 240,000 bbls. shipped out by way of tank cars, while over 40,000 bbls. went to local refineries. This gives a daily average distribution total of around 800,000 bbls. per day, while nearly 110,000 bbls. per day was run to storage in the district.

Next week's distribution report will show a great decline in tank car shipments. The only oil now being shipped by this method is coming from steel storage in the district. Three railroads serving the district, and carrying practically all the oil shipped by cars have already laid off a good many men.

When the wells are reopened, but under curtailment orders, with the vast number of trunk pipe lines in the area, having a total average daily capacity of better than 700,000 bbls. when all are completed that are now under construction, competition between the purchasing companies should be keen enough to maintain a good price for the oil produced in the district, for all of the companies will desire to run as much oil as they can, ratably, from the field which is in a more strategic geographical location than many of the other Texas fields.

Producers' Sales Agency

Another factor which will enter into keeping up the price for the oil produced in the district, is the newly organized Oil Producers' Sales Agency which has been created to control and market oil produced by independent operators in East Texas. The three main purposes of the agency is to furnish facilities and agencies through which the members of the association, having unrefined natural oil, wet or dry natural gas, casinghead gasoline and kindred products, shall market their products; to gather and disseminate information on cost of production, stocks on hand, transportation costs, and other pertinent matters pertaining to the marketing and transportation of crude oil; and to require its members to obey the laws of the State of Texas and such rules laid down by state officers or commissions designed to conserve the State's resources.

This organization, formed at Dallas today, and headed by S. A. Guiberson, Jr., and Sam McCorkle, is patterned after the California Sales Agency, and is designed mainly for the benefit of the independent producers in the district. It does away with individual selling and marketing of the oil of many different small companies and operators, and pools their production to obtain better markets, putting the independent operators on a more competitive basis with the major companies, but instead of being a business rival of those companies at all times, will no doubt oftentimes serve as an agency through which they will purchase oil from the many small operators.

Austin Hearing

Prorationists and antiprorationists will again go to bat at Austin on May 25 when arguments will be heard by the Railroad Commission on both sides of the curtailment question. It will probably be only a duplication of past meetings. The commission will then decide the amount of allowable to be given the district under new curtailment orders.

Race to Stake Locations

While the district is standing with all producing wells shut in, operators, small companies and majors alike, have been racing to stake more locations, and start drilling of new wells, the majors taking the lead, and reporting over half of the new locations. This is undoubtedly being done to draw off as much of the flush production as possible before pressures are dissipated further, and before artificial production methods have to be used to produce the wells.

Bottom hole pressure is undoubtedly being built up in the district due to the wells standing shut in, but the amount of such increases cannot be gauged until the wells are opened and tests made. The building up of this pressure is one of the benefits to be derived by the shutdown. Pressures have been falling in various parts of the district, several of the new completions contributing specific knowledge as to the decrease. The Humble Oil & Refining Co. completed two wells in the Thomas Smith Survey, on the eastern side of the Joiner Pool a few days before the district was shut in, these wells refusing to flow. The first, No. 1 George Alexander, topped the Woodbine sand at 3,671 feet and the Georgetown lime at 3,761 feet. It swabbed through tubing, but would not flow, and has been temporarily abandoned at a total depth of 3,795 feet.

The same company's No. 1 Eula McDavid, located in the same survey, has been temporarily abandoned at a total depth of 3,781 feet with 300 feet of oil in the hole after refusing to flow. This well topped the sand at 3,674 feet and the Georgetown at 3,774 feet.

Many other wells in the district, especially on the eastern side of the Joiner Pool where the sand is not as thick as in other parts of the field and district, have gone dead and had to be revived by swabbing and agitating, some refusing to flow even after such methods of resuscitation had been used. The wells which fail to respond by swabbing are put on the pump.

Pressures have declined in the heart of the Kilgore Pool also, and companies holding considerable undeveloped acreage in that pool have been rapidly staking new locations each week, carrying on drilling at a breakneck speed to get to the sand and obtain as much as the flush production as possible before the whole field is put on the pump.

There were 105 new locations staked this week, and although many of these locations may not be drilled immediately due to lack of gas and fuel oil, those companies which have plenty of fuel oil will undoubtedly take advantage of it and drill to the sand and leave the well standing in that condition, or may complete them and immediately shut them in after they are completed.

First Reports

Fifty-three first reports were named for the Lathrop area, 23 for the Joiner and 25 for the Kilgore area this week. Thirty wells were completed in the Joiner area, 20 in the Kilgore area and 17 in the Lathrop area, with five wildcats being abandoned. All of the latest completed wells are standing shut in under martial law, and did not have a chance to produce any oil. The total number of producers in the entire district is now near the 1,700 mark.

Before the shutdown went into effect The Texas Company completed its western Gregg County outpost well on the Walker farm in the S. L. Davis Survey for an initial production of 145 bbls. in three hours. The test was formerly considered as a dry hole limiting production on this side of the field, but it was deepened from 3,580 to 3,598 feet and completed at the latter depth, changing the appearance of this edge of the Gladewater area. The well is about one-half mile west of the Selby Oil & Gas Co.'s No. 1 Snavely.

Van Field Raised

Effective at 7 a. m., August 20, pipe line runs from the Van Field were raised to 50,000 bbls. per day for the remainder of August, the present proration period. This is the allowable production of the field under existing orders, but during the past two months the outlet has been only 43,000 bbls. daily. The East Texas shutdown no doubt is responsible for this increase in runs from the Van Field.

The Pure Oil Co. posted an increase in price for crude produced in the Van Field, the new posting taking effect August 22. Forty-eight cents will be paid for 29-29.9° gravity with a 2-cent increase per degree gravity up to 40 and above. This makes top price 70 cents.

Some unofficial reports stated that The Texas Company and Empire Gas & Fuel Co. had abandoned plans for laying a 12-inch line from Gregg County to the Gulf Coast, but these reports were erroneous, and the companies will continue their work preparatory to moving in pipe, and commencing the actual laying of the line which is to be completed 30 days after this work starts.

EAST CENTRAL TEXAS WILDCATS

Week Ending August 24

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks:
Riango Oil Co.'s No. 1 J. Lynn, 1,400 ft. from NE line and 7,425 ft. from E line of survey, B. Brown Sur.	..Fishing 2,755 ft.
H. B. McConnell et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in S half of 139-ac. tract, M. Main Sur.	.....Derrick.

ANGELINA COUNTY

R. O. Moore's No. 1 Abney Estate, 50 ft. N of Blk. No. 6, immediately out of city limits of Lufkin	....T. D. 1,350 ft.; set 5⅝-in. csg.; bailed dry.
Pollick Oil Co.'s No. 1 Sessions, 1,350 ft. from N and 1,250 ft. from E line of Jesus De La Garza Sur.	....Drlg. 3,950 ft.

BOWIE COUNTY

Tom Bell's No. 1 Merritt, 1,225 ft. from N and 875 ft. from E line of survey, T. S. McKinney Sur.	.....Shut down 2,650 ft.
Logan and Elliott's No. 1 J. W. Smith, 9,500 ft. S and 2,500 ft. W of NE cor. of survey, Charles Lewis Sur.	.....Derrick.
Parkering-Jones et al's No. 1 W. W. Whybark, 200 ft. from S and W of SW cor. of J. A. Dyer Sur.	.....Shut down 20 ft.
Lee Timberlake et al's No. 2 Julius N. Tidwell, 655 ft. from E and 2,510 ft. from S of survey in L. M. Rice Sur.	.....Salt water on drill stem test; shut down 3,000 ft.

CHEROKEE COUNTY

Bridges and Candler's No. 1 Berryman, center of Berryman tract, James Dill Sur.	.....Rigging up.
Denman et al's No. 1 Mrs. Renfroe, 330 ft. N of S line and 330 ft. E of W line of farm, Uriah Moore Sur.	.....Derrick.
Helen-Clare Oil Co.'s No. 1 Mrs. M. P. Perkins, 1,300 ft. from N and 450 ft. from W of survey, Thomas Stafford Sur.	.....Rig up.
William A. Stone's No. 1 Blount Decker, 900 ft. E of E line of S. Selman Sur. and 1,200 ft. S of N line of E. M. Decker 40-ac. tract in George Ruddle Sur.	.....Fishing at 3,100 ft. for drill stem; T. D. 5,406 ft.
Walton Oil Co.'s No. 1 B. Singletary, 250 ft. W and 150 ft. N of NE cor. of M. Lacey Sur. and in Walters Sur. on Singletary 84-ac. tract	.....T. D. 2,960 ft.; shut down.

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COMPLETIONS IN EAST TEXAS

Gregg County

A. B. D. Oil Co.'s No. 1 H. McNealy, top sand 3,670 feet, initial production 1,000 bbls. in six hours, total depth 3,682 feet. Allison Drilling Co.'s No. 1 W. J. Robertson, top sand 3,555 feet, initial production 800 bbls. per hour, total depth 3,645 feet. Continental Oil Co.'s No. 1 Crews, top sand 3,670 feet, initial production 190 bbls. per hour, total depth 3,689 feet. Continental Oil Co.'s No. 2 Crews, top sand 3,661 feet, initial production 170 bbls. per hour, total depth 3,680 feet.

Gulf Production Co.'s No. 1 S. B. Hall, top sand 3,651 feet, initial production 100 bbls. per hour, total depth 3,657 feet. Gulf Production Co.'s No. 2 J. S. King, top sand 3,567 feet, initial production 124 bbls. per hour, total depth 3,577 feet. Humble Oil & Refining Co.'s No. 9-B S. S. Laird, top sand 3,553 feet, initial production 21 bbls. first hour, total depth 3,519 feet. Kilgore Central's No. 1 J. Howe, temporarily abandoned.

Leonard Petroleum Co.'s No. 1 Register, top sand 3,678 feet, initial production 130 bbls. per hour, total depth 3,684 feet. J. L. Luckel's No. 1 Anna Bean, location temporarily abandoned. F.

(Continued on Page 29)

Schleicher Test Will Be Drilled Deeper

Showed No Increase in Production at 4,065 Feet but Operators Are Hopeful. Important Location in Western Crane County

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Aug. 24.—West Texas crude oil received a 10-cent boost in price on Saturday morning, August 22, when The Texas Company increased the flat price from 25 cents to 35 cents per barrel, this including Lea County, New Mexico, crude. Other purchasing companies followed the move of The Texas Company in the district, thus giving the Permian Basin a slight benefit as a result of the East Texas shutdown.

The distribution report for the week ending August 12 showed a decline of around 3,300 bbls. daily in West Texas, and production dropping off 2,000 bbls. daily, while production and distribution on the opposite side of the State continued to gain, but the next distribution report will probably show a great difference in movements from West Texas, although production is not expected to change much, practically all fields in the district producing under prorated amounts. Shipments and pipe line runs from the western district should increase to a great extent as but little storage oil is all that can be moved out of East Texas.

Trunk line runs out of the district for the past period show a daily average of 200,148 bbls., whereas pipe line runs out of East Texas were over 511,000 bbls., showing a difference of over 300,000 bbls. per day between the old and new districts. Tank car shipments from West Texas averaged only 400 bbls. per day whereas in the eastern district they ran over 240,000 bbls. per day, an astounding difference. However, tank car shipments are not expected to increase out of the older district due to the difference in quality and price of the two crudes, and distance of West Texas from markets. The purchasing companies have been purchasing the cheap crude in East Texas, storing it in the field and on the Gulf Coast and Eastern Seaboard for future refining purposes, and will not increase their shipments from West Texas to any great extent as the crude from that district is not needed, and has no virtues as had the East Texas crude.

Main Test of Interest

J. D. Wesner's No. 1 Nicks, the main test of interest in the West Texas district, located in Section 77, Block LL, T.C. Railway Survey, Schleicher County, is now drilling plug. Six and five-eighths-inch casing was cemented with 50 sacks of cement at 4,065 feet in shale, the total depth of the hole. Drilling will be resumed as soon as the plug is drilled out. The test is showing no increase in oil after drilling to the present total depth, but the owners hope to pick up heavier saturation when drilling is resumed, and many are watching the outcome of the test, which is in an area not yet having production, but in which several tests have encountered good showings of oil prior to the showing being found in the Nicks test.

An important location has been staked in western Crane County, Penn Oil Co.'s No. 1 Tubbs being started approximately 1 mile northwest of the Cranfill Brothers and Gulf Production Co.'s No. 1 Tubb producer in Section 8, Block B-27. The new location was staked in Section 3, Block B-27. A test 2 miles south of the Tubb producer proved dry, but acreage to the northwest of the producer is considered as most likely for the best production in the area. The Tubb well is but a small producer, producing from an horizon at 4,301 feet, or below the sulphur water horizon, the first producer of its kind in the basin.

PANHANDLE DISTRICT

The Texas Company August 21 raised the price of Gray County crude from 30 to 59 cents, and Carson and Hutchinson County crude from 26 to 53 cents, with all other purchasing companies operating in the district meeting the increase the following day. This is more good news for a district which has had its share of troubles during the past two years of chaotic conditions in the industry, and which has borne the brunt of low prices, where more pipe line connections were needed, but which could not be obtained under the existing circumstances. However, conditions have changed in the district—all wells have been given connections, and purchasing companies and refineries in the district have been seeking connections and more oil from the district, a vast difference from the past.

Wichita Falls District

The Texas Company on August 21 also posted an increase in crude prices in the Wichita Falls and the Ranger district, the top price reaching 70 cents for 40 degrees gravity and above. Oil below 29 gravity is 46 cents, with 2 cents increase per degree gravity up to 40 degrees and above.

Much oil had been going to the Wichita Falls refineries from East Texas before that district was shut in, and the new prices in the North Texas district will put that crude on a competitive basis with the East Texas crude. But little crude can be obtained in the latter district at the present time, and that coming from storage, if coming at all, and at the last posted price of 68 cents, consequently the Wichita Falls refineries will have to fall back upon crude from their own district unless they have long standing contracts for cheap oil from East Texas. The higher postings in the Wichita Falls district will be of great aid to the producers in that district who have been holding back their production for better prices, refusing to let it go for the prices which have been prevailing throughout the district for the past several months.

There is but little activity in the Panhandle, Ranger and Wichita Falls districts, the low price of crude tending to hold back drilling, and East Texas calling many of the operators from these districts.

WEST TEXAS PRODUCTION
Week Ending August 22

County—	No. wells	Prod.
Andrews	4	none
Crane	377	15,116
Crockett	51	1,290
Ector	78	7,596
Fisher	11	502
Garza	2	none
Howard-Glasscock	543	26,508
Irion	9	72
Jones	86	1,345
Loving	43	3,372
Mitchell	111	1,829
Pecos	547	72,320
Reagan	355	25,022
Runnels	5	72
Scurry	5	none
Upton	263	4,631
Taylor	3	none
Ward	65	3,103
Winkler	595	39,393
Total production this week		204,572
Total production last week		204,875
Decrease		303

COMPLETIONS IN NORTH CENTRAL TEXAS

Archer County

Hammond & Steele's No. 1 Kemp & Kempner, dry and abandoned, total depth 1,825 feet. Marshall & Lewis' No. 1 Ferguson, temporarily abandoned, total depth 1,686 feet. W. E. Omohundro's No. 2 Turbeville, dry and abandoned, total depth 1,460 feet.

Wichita County

W. H. Hammond's No. 3 Bradley, dry and abandoned, total depth 4,002 feet.

PANHANDLE DISTRICT COMPLETIONS

Carson County

Carson Lake Oil Co.'s No. 1 Kees, total depth 3,336 feet, plugged back to 2,670 feet, initial production 25,000,000 feet of gas from 2,230-2,670 feet. The Texas Company's No. 1 Crutchfield, top pay 2,505-2,650 feet, initial production 4,000,000 feet of gas, total depth 2,653 feet.

Gray County

Danciger Oil & Refining Co.'s No. 1-A Pritcher, top pay 3,312-14 feet, initial production 150 bbls. per day, total depth 3,320 feet. Stekoll & Reiger's No. 1 Davidson, total depth 3,250 feet, plugged back to 3,170 feet, top pay 3,150-54 feet, initial production 30 bbls. per day on pump.

Hutchinson County

Stanolind Oil & Gas Co.'s No. 2-B Pritcher, top pay 3,015-60 feet, shot 230 quarts 3,015-90 feet, initial production 285 bbls., total depth 3,100 feet.

COMPLETIONS IN WEST TEXAS

Howard County

Humble Oil & Refining Co.'s No. 1 W. R. Settles (recompleted), top pay 2,376 feet, drilled deeper from 2,295 feet, initial production 650 bbls. in 24 hours, total depth 2,445 ft.

Irion County

Perry Fox' No. 1 Harlan Horney, dry and abandoned, total depth 1,503 feet.

Loving County

Adams and others' No. 1 Wichmann, top pay 4,282-91 feet, total depth 4,327 feet, plugged back to 4,325 feet, shot 180 quarts 4,281-4,325 feet, flowed 490 bbls. first 24 hours after shot, initial production 490 bbls. flowing. West Texas Petroleum Corp.'s No. 2 J. G. Allen, top pay 4,298 feet, total depth 4,334 feet, plugged back to 4,305 feet, drilled deeper from 4,311 feet at which depth it was first completed, shot second time with 240 quarts from 4,265-4,305 feet, first 24 hours flowed 345 bbls.

Upton County

C. C. Duffey and others' No. 5 H. L. McClintic, top pay 2,885 ft.; shot 650 quarts 2,885-3,049 feet, initial production

(Continued on Page 31)

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ending August 24

CARSON COUNTY

Company, well, farm name, section and block—	Remarks:
El Paso-Amarillo O. & G. Co.'s No. 1 Chapman, 594 ft. S, 1,458 ft. E, Sec. 7, Blk. 3, A.B.&M. Sur.	Spud.
Empire G. & F. Co.'s No. 1 Poling, 1,320 ft. S and W, Sec. 28, Blk. Y-2, T.T.R.R. Sur.	Drlg. 1,300 ft.
Magnolia Pet. Co.'s No. 1 Connell, 330 ft. N and E of SE, Sec. 66, Blk. 4, H.&G.N. Sur.	Cellar.

CHILDRESS COUNTY

C. L. Sloan et al's No. 1 B. P. Smith, Sec. 49, P. P. Knott lands	T.D. 5,000 ft.

COLLINGSWORTH COUNTY

Dixon et al's No. 1 Bell, 330 ft. N, 1,320 ft. W, Sec. 102, Blk. 21, H.&G.N. Sur.	Fishing for pipe 3,508 ft.
Downey et al's No. 1 Beasley, SE cor. SW SE, Sec. 95, Blk. 15, H.&G.N. Sur.	Rigging up.

GRAY COUNTY

Anderson et al's No. 2 Vollmert, 330 ft. N and W, SW Sec. 140, Blk. 3, I.&G.N. Sur.	Rig.
Back & Barber's No. 1 Back, 990 ft. S and 330 ft. W, Sec. 45, Blk. 25, H.&G.N. Sur.	Moving in material.
Boyles et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur.	Spudded and S.D.
Brown et al's No. 1 Duncan, 330 ft. S and E, NW, Sec. 93, Blk. 3, I.&G.N. Sur.	Drlg. 1,050 ft.
Humble O. & R. Co.'s No. 1 Hughey, C NE, Sec. 154, Blk. 3, I.&G.N. Sur.	Set 8-in. csg. 2,390 ft.
Parton Holt and Shell Pet. Corp.'s No. 1 Morse, 330 ft. S and E, Sec. 6, Blk. 26, H.&G.N. Sur.	Rig.
Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W, cor. SE, Sec. 200, Blk. B-2, H.&G.N. Sur.	S.D. 2,770 ft.
Magnolia Pet. Co.'s No. 1 Heaston, NE cor. S½ NE, Sec. 154, Blk. 3, I.&G.N. Sur.	Rig on ground.
Nelson et al's No. 1 Crews, 330 ft. S and E, NW, Sec. 13, Blk. 25, H.&G.N. Sur.	S.D. 2,619 ft.

(Continued on Page 95)

WILDCAT OPERATIONS IN WEST TEXAS

Week Ended August 24

BREWSTER COUNTY

Company, well, farm name, section and block—	Remarks—
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor. Sec. 45, Blk. G-15, G.C.&S.F. Sur.	Shut down 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	Shut down 1,302 ft.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur.	Shut down 2,900 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine	Shut down 1,750 ft.

COCHRAN COUNTY

Penn Oil Co.'s No. 1 Myrick, C Labour No. 80 of League 139, Carson County School Lands	Rigging up (standard).

CONCHO COUNTY

Beesley et al's No. 1 Waring Estate, 400 ft. from N and E Sec. 163, T.&N.O. Sur.	Shut down 267 ft.
Betts & Dennis' No. 1 H. E. Woods, 710 ft. from E and 150 ft. from S Sec. 3, H.E.&W.T. Sur.	Shut down 80 ft.
Turner et al's No. 1 Borsig, 150 ft. from S of NE cor. G. Emmig Sur. 130, 6 miles W of Paint Rock	Shut down 1,850 ft.

CRANE COUNTY

Penn Oil Co. et al's No. 1 J. B. Tubb, 330 ft. from N and E of SW cor. of S 80 acres of NW cor. Sec. 3, Blk. B-27, P.S.L. Sur.	Location.
Southwest Oil Prod. Co.'s No. 1 Tubbs, 2,310 ft. from NW and SW Sec. 3, Blk. B-27, P.S.L. Sur.	Location.

CROCKETT COUNTY

Doleman & Moore's No. 1 Ferner, 3,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur.	Spudded and shut down.

CULBERSON COUNTY

Kornrumpf et al's No. 1 Garren, 330 ft. S and W Sec. 15, Blk. 79, Public School Land	Shut down 1,280 ft.

(Continued on Page 95)

METHODS OF APPLYING UNIT POOL OPERATION

(Continued from Page 14)

carried out collectively by the owners in that pool under some procedure prescribed by the administrative agency of the state that would insure justice to every individual owner and safeguard the public interest against abuse of the control.

Form of Operation

The form of operation for each local pool might well be left to the discretion of the operators in that pool acting collectively. The function of the administrative agency should be merely to see that a procedure is followed by which equitable apportionment is being made among the respective owners and that waste is avoided—both to be done according to the standards set out in the legislation. When restriction of the pool to market demand becomes necessary the administrative agency of the state should be empowered to determine what quantity represents the market demand.

The rules and regulations promulgated by that administrative agency might take any one of many forms to carry out the purpose of the statute, but one fear that opponents of legislation have long expressed might well be dismissed, namely; that in some vague way state regulating bodies will appropriate an undue amount of control under the authority given. On the contrary the past several years' experience has demonstrated that these boards and commissions are generally found reluctant to assume even that degree of control that the welfare of the industry and those engaged in it demands. Under any fair type of regulation by which order, system, and justice are promoted, each owner of property would have much greater individual freedom of action in those matters that are of consequence to him than he is permitted to have under the present chaotic condition when economic forces alone are permitted to control.

Experience has demonstrated that these boards and commissions seek to interpret the desires of those whose property is affected and to be guided by their wishes when that can be done without doing injury to the public interest. They are more likely to be sympathetic to the welfare of the industry they regulate than are blind economic forces. But a prerequisite to securing that sympathetic regulation is the development of public confidence, which in turn comes by education—by imparting to the public an understanding of what the issues are, and, of course, by conducting the industry along lines that justify public confidence.

Apply to Present Pools

We believe that the four legislative principles above proposed should be made to apply both to oil and gas pools already in process of being depleted as well as to pools yet to be discovered; but the rules and regulations should make a distinction in their administration so that unreasonable operating readjustments might not be required in pools under process of depletion.

We believe the rules and regulations should make provision that extensive commercial exploitation of pools hereafter discovered should be delayed until sufficient exploratory work shall have been completed by the owners collectively to define the pool and to supply information on which each owner's proportionate share of the reservoir content is, or can be later, determined; and until a plan of efficient extraction and equitable apportionment is evolved and adopted.

We believe that the necessary procedure should be provided whereby costs incident to exploratory development and co-operative exploitation carried on under collective action can readily be made a lien on the operators' portion of the products extracted from the common pool.

We believe that the rules and regulations should provide ways and means for setting up a democratic form of local pool organization that would provide some form of majority control in those matters which if done by one operator must necessarily be followed by all, like well spacing, reduction of pressures, etc. However the regulations should likewise protect the minority interest against abuse of that control and provide for its representation in the management. This would do away with the ability of a single operator or a small minority to prevent efficient operation by refusal to co-operate.

Desirable Details

Many other desirable details of administration will occur to the reader. No effort will be made to enumerate them all here. If the basic principles be established these details will be adopted as their need becomes apparent. A few are given as examples of what might be found helpful.

The rules and regulations should provide procedure whereby each owner's share of the oil and gas from the common pool can be delivered to him or to his order in kind at the cost of extraction, as determined over a specified time by the collective owners.

Procedure should be provided whereby, within an adequate margin of safety, each owner's share of oil or gas could be delivered to him at the time and in quantities that he desires, in like manner as he withdraws his daily requirements of cash from the bank irrespective of the time other depositors withdraw theirs.

Another detail of a similar nature is that arrangements should be made whereby as early as relative reservoir content is determined to such extent as is practicable each owner may be given a certificate representing his equity within a proper margin of safety that would be readily transferable; so that those who wish to "cash in" on their oil and gas immediately might do so without the necessity of bringing those products to the surface until they are needed to supply market requirements.

Many other details of operation might be mentioned but we trust these are sufficient to support the contention that stabilizing the petroleum industry would be a very simple undertaking and easily accomplished if the several state legislatures would define the correlative rights and duties of participants in this new industry in harmony with old established legal principles long applied in other industries to like problems.

The great obstacle that stands in the way of stabilization is, therefore, not lack of knowledge of the things that would accomplish that result, but it is instead lack of confidence that men have in each other. A familiar example of how this lack of mutual confidence operates to defeat stabilization movements is available in the recent session of the Texas legislature when the need was pressing and the remedy clear. Yet the sum total of results from that special session is ridiculously inadequate to cope with the problem that must be solved. A flood of oil threatened the state's economic welfare, yet the bill that was passed to curb it reads more like an attempt to restrict control than to impose it.

Comment From Texas

An active participant in that session writes of it as follows:

"The special session of the legislature is now history. The bill which undertook to authorize agreements for unit operations was never voted on, largely because of an opinion by the present attorney general that such a law would probably overthrow antitrust laws and would handicap him considerably in enforcing antitrust laws. The investigation by the legislature has caused considerable body of opinion to be formed on the point that the larger companies have been able to evade antitrust laws and many legislators took the position that the bill authorizing unitization was nothing more than an effort to evade antitrust laws and perhaps to effect a repeal thereof."

However much we might deplore and criticize this mutual suspicion that men have regarding each other's motives, the fact remains that it exists to such an extent as continually to prevent the enactment of effective stabilization measures. Progress will have been made when that fact is frankly faced and provisions are made for meeting it. Mutual suspicion is not a trait of character confined to the oil industry. Men know that the motive of each other in business is not altogether altruistic in design. However in older industries the need of mutual protection has built up machinery and safeguards that make abuse of power difficult and unprofitable. It must become so in the petroleum industry before confidence can be fully established.

Both government and industry are in agreement that because of the peculiar nature of petroleum deposits competitive drainage practices must cease and co-operative drainage practices be substituted therefor. But this necessary co-operation gives to the industry an opportunity to take advantage of the public that the latter will be loath to grant until it is convinced the safeguards set up are adequate to protect it from abuse in that power granted. In like manner and for the same reason do men hesitate to turn their properties into co-operative control where they would become minority interests.

All of this means that any machinery and program set up to effectuate stabilization must be so designed as to throw around the movement the greatest possible safeguards against the abuse of the power granted. Confidence must be established; and ways and means of establishing confidence are so many and varied, and so well known, that it is unnecessary to make them the basis of extensive discussion here. We merely re-emphasize that the **greatest single deterrent to stabilization is lack of confidence of men in each other. And since this exists and will always exist,** a necessary part of any program that will offer a solution is the construction of it so that power which comes through it might not be abused.

EAST CENTRAL TEXAS

(Continued from Page 25)

L. Luckel's No. 1 Dixon, location abandoned. Prairie Oil & Gas Co.'s No. 1 Elder, top sand 3,519 feet, initial production 217 bbls. per hour, total depth 3,530 feet.

Shell Petroleum Corp.'s No. 8 J. W. Elder, top sand 3,542 feet, initial production 191 bbls. per hour, total depth 3,568 feet. Same company's No. 11 J. B. Watson, top sand 3,565 feet, initial production 105 bbls. per hour through three-quarters-inch tubing choke, total depth 3,600 feet. Same company's No. 2 Willoughby, top sand 3,538 feet, initial production 145 bbls. per hour, total depth 3,588 feet. Sinclair Oil & Gas Co.'s No. 4-B A. A. King, top sand 3,436 feet, initial production 250 bbls. per hour through open casing, total depth 3,462 feet. Same company's No. 5-B A. A. King, top sand 3,469 feet, initial production 227 bbls. per hour, total depth 3,492 feet. The Texas Company's No. 1 S. B. Walker, top sand 3,595 feet, initial production 145 bbls. in three hours, total depth 3,598 feet. Doctor Thompson's No. 1 Seaborn King, top sand 3,555 feet, initial production 120 bbls. per hour, total depth 3,588 feet.

Rusk County

Arkansas Fuel Oil Co.'s No. 2 Beale, top Pecan Gap, 2,680 feet, base 3,072 feet, top Austin chalk 2,508 feet, top sand 3,661 feet, initial production 120 bbls. per hour, total depth 3,684 feet. Bullock Oil Co.'s No. 1 Alford, top sand 3,680 feet, initial production 1,008 bbls. in 18 hours, total depth 3,747 feet. E. L. Chapman's No. 2 Minchew, top sand 3,758 feet, initial production 135 bbls. per hour, total depth 3,774 feet. Jim Cloud's No. 1 Stone, top sand 3,637 feet, shut in, no gauge, total depth 3,685 feet.

Cochran & Martin's No. 1 Canseler, top sand 3,728 feet, initial production 136 bbls. per hour, total depth 3,785 feet. Dana Oil Co.'s No. 1 Stone, top sand 3,651 feet, initial production 185 bbls. per hour, total depth 3,709 feet. East Texas Refining Co.'s No. 1 Holland, top sand 3,665 feet, initial production 80 bbls. per hour, total depth 3,700 feet. Hoosier's No. 1 Neal, top sand 3,736 feet, initial production 62 bbls., total depth 3,795 feet.

Humble Oil & Refining Co.'s No. 2 Barksdale, top sand 3,769 feet, initial production 430 bbls. first five hours through tubing and casing, total depth 3,778 feet. Same company's No. 4 Blackwell, top sand 3,677 feet, initial production 83 bbls. per hour through three-fourths-inch tubing choke, total depth 3,679 feet. Same company's No. 2 Dennis, top sand 3,703 feet, initial production 100 bbls. per hour through three-fourths-inch tubing choke, total depth 3,728 feet. Same company's No. 1 First Guaranty State Bank, top sand 3,732 feet, initial production 109 bbls. per hour, total depth 3,740 feet. Same company's No. 5 J. E. Glover, top sand 3,705 feet, initial production 103 bbls. per hour, total depth 3,730 feet. Same company's No. 13 Kangerga, top sand 3,650 feet, initial production 103 bbls. per hour, total depth 3,675 feet. Same company's No. 1 Key, top sand 3,700 feet, initial production 106 bbls. per hour through three-fourths-inch tubing choke, total depth 3,705 feet. Same company's No. 2-A E. L. Silvey, top sand 3,679 feet, initial production 110 bbls. per hour through 1-inch tubing choke, total depth 3,704 feet. Same company's No. 1 J. Thompson, top sand 3,700 feet, initial production 135 bbls. per hour through three-fourths-inch tubing choke, total depth 3,707 feet. Same company's No. 3 A. L. Walker, top sand 3,648 feet, initial production 62 bbls. in 30 minutes through open tubing, total depth 3,660 feet.

H. L. Hunt's No. 5 Young, top sand 3,656 feet, initial production 135 bbls. per hour through open tubing, total depth 3,711 feet. Magnolia Petroleum Co.'s No.

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B. W. Deane, Port of Spain, Trinidad, B. W. I.
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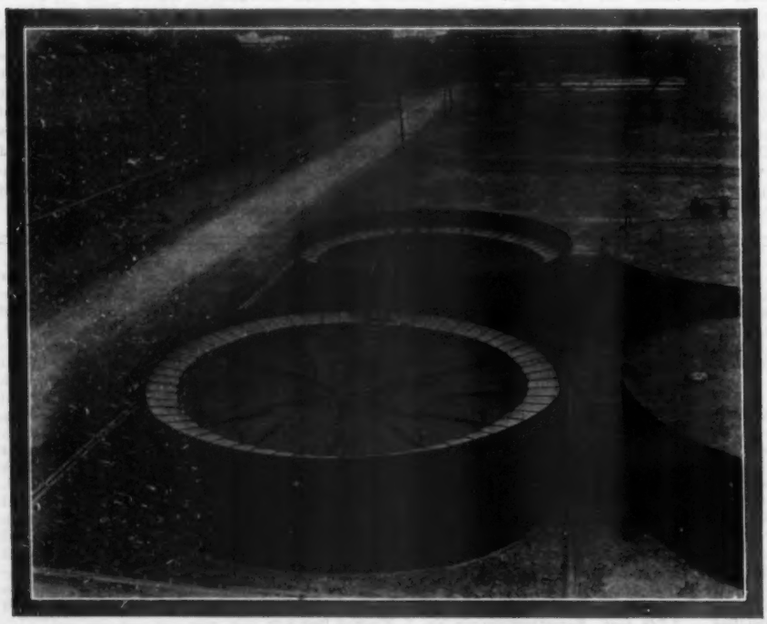
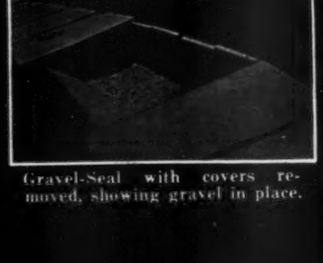
F. E. Richardson & Co., Honolulu, Hawaii



Gravel-Seal covers in service.

Section of sub-structure on outer rim.



Gravel-Seal with covers removed, showing gravel in place.

Self adjusting tread stair in lowest position.

1 Mason, top sand 3,606 feet, initial production 166 bbls. in 15 minutes through open casing and tubing, total depth 3,617 feet. Mitchell and others' No. 1-B Fredrick, top sand 3,604 feet, initial production 400 bbls. in 24 hours, total depth 3,709 feet. A. W. Phillips' No. 1-B Pinkston, top sand 3,610 feet, initial production 350 bbls. per hour through open casing, total depth 3,663 feet. Vaughn and others' No. 1 Reagan, top sand 3,696 feet, initial production 200 bbls. per hour, total depth 3,746 feet.

Humble Oil & Refining Co.'s No. 1 George Alexander, top Pecan Gap 2,659 feet, base 3,060, top Austin chalk 3,498 feet, top sand 3,671 feet, top Georgetown lime 3,761 feet, swabbed through tubing and would not flow, temporarily abandoned, total depth 3,795 feet. Same company's No. 1 Eula McDavis, top Pecan Gap 2,768 feet, base 3,138 feet, top Austin chalk 3,562 feet, top sand 3,674 feet, top Georgetown lime 3,774 feet, will not flow; 300 feet of oil in hole, temporarily abandoned, total depth 3,781 feet. Beard & Hammond's No. 1 Perry, temporarily abandoned. P. O'Brien's No. 1 C. E. Holland, location abandoned. Devonian Oil Co.'s No. 1 Motley, top sand 3,615 feet, initial production 110 bbls. per hour, total depth 3,758 feet.

Gulf Production Co.'s No. 1-A C. E. Christian, top sand 3,672 feet, initial production 93 bbls. per hour, total depth 3,693 feet. Gulf Production Co.'s No. 5 Jernigan, top sand 3,614 feet, initial production 113 bbls. per hour, total depth 3,624 feet. Hick Drilling Co.'s No. 2 J. N. Peterson, temporarily abandoned.

Humble Oil & Refining Co.'s No. 26 Crim, top sand 3,590 feet, initial production 79 bbls. per hour, total depth 3,615 feet. Same company's No. 3-A B. F. Laird, top sand 3,609 feet, initial production 95 bbls. per hour, total depth 3,634 feet. Same company's No. 1-B Sexton, top sand 3,631 feet, initial production 92 bbls. first hour, total depth 3,656 feet.

McMillan and and others' No. 1 Virgil Barton, location abandoned. Magnolia Petroleum Co.'s No. 6 Bradbury, top sand 3,672 feet, initial production 145 bbls. in 15 minutes, total depth 3,677 feet. Mrs. J. Richardson's No. 1 Jernigan, abandoned location. Shell Petroleum Corp.'s No. 1 J. H. Spivey, top sand 3,712 feet, initial production 107 bbls. per hour, total depth 3,770 feet.

Smith County

H. H. Lemaster's No. 1 Wright, top sand 3,710 feet, initial production 495 bbls. per hour, total depth 3,720 feet. Gulf Production Co.'s No. 1 Smith, top sand 3,660 feet, initial production 120 bbls. per hour, total depth 3,665 feet. Alex McCutchin's No. 1 Wright, top sand 3,708 feet, initial production 50 bbls. per hour, total depth 3,710 feet. Magnolia Petroleum Co.'s No. 7 Wright, top sand 3,639 feet, initial production 63 bbls. in 15 minutes through open casing and tubing, total depth 3,642 feet. The Texas Company's No. 1 J. W. Wilson, top sand 3,612 feet, initial production 185 bbls. per hour through open tubing, total depth 3,640 feet.

SEE INCREASED DEMAND FOR REST OF THE YEAR

(Continued from Page 16)

sponding 1930 total. Deducting the anticipated imports and withdrawals from storage from the total calculated requirements, there remains the balance of 451,915,000 bbls., or that portion of the requirements to be met from domestic production. This anticipated domestic crude production is an increase of 21,676,000 bbls., or 5.04 per cent over the recorded production during the second half of 1930. The domestic crude oil production indicated by the committee's calculation would permit an average daily output of slightly more than 2,450,000 bbls.

Refine East Texas Crude Abroad

Present conditions in the East Texas fields have broadened the range of crude oil distribution from this area beyond that which normally might be expected. An increase in the shipment of East Texas crudes to foreign countries may be anticipated. The committee has been informed of recent contracts for the purchase of approximately 2,000,000 bbls. of East Texas crude for shipment to the Netherland West Indies for refining. The major portion of the gasoline resulting from the processing of this crude will be returned to the United States, being classified upon entry as imports of foreign gasoline. As a result of these arrangements, gasoline imports during the remainder of the year may be somewhat higher than if these refining operations were limited to Venezuelan crude and crude oil exports from the United States will be increased accordingly. Contracts providing for increased shipments of East Texas crudes to Europe also have been reported.

Crude oil production during the first six months of 1931 was approximately 45,000,000 bbls. less than in the corresponding period of 1930. California, with a decline of approximately 23,000,000 bbls., was the largest contributor to the reduction, being followed by Oklahoma, with a reduction of approximately 16,500,000 bbls. The remainder of the decline was divided over a number of the smaller producing states.

Texas, holding first rank among states in the production of oil, produced virtually the same quantity of crude petroleum during the first half of 1931 as in the first half of 1930. East Texas fields produced 31,399,000 bbls. during the first six months of 1931. As these fields were not producing in 1930, and, as the State total is approximately the same for the two periods, the increase resulting from East Texas production obviously was offset by curtailment in other portions of the State, West Texas dropping off about 16,000,000 bbls., Gulf Coast fields about 5,000,000 bbls., and the remainder of the State about 10,000,000 bbls.

In comparison with the decrease in crude oil production of approximately 45,000,000 bbls., it is interesting to note that crude oil run to stills during the period was nearly 40,000,000 bbls. less than in 1930, and the total demand for all petroleum products was approximately 35,000,000 bbls. less. These comparisons indicate that the decline in demand, particularly in shipments to foreign countries, was an important factor in negativing the benefits which were expected to accrue from the drop in crude oil production.*

Respectfully submitted,
Committee of Petroleum Economics
Martin Van Couvering
Howard Bennette (absent)
Alfred G. White
John W. Frey
E. B. Swanson, chairman

TABLE 2—SUMMARY TABLE
Last Six Months 1930—1931

	Last six months 1930 (bbls.)	Last six months 1931 (estimates) (bbls.)	Change per cent
Motor Fuel Demand:			
Domestic	205,156,000	219,530,000	7.01
Exports and other shipments	30,813,000	23,398,000	—24.10
Total motor fuel demand	235,969,000	242,928,000	2.95
Motor Fuel Supply:			
Refinery production	214,749,000	223,557,000	4.10
Drawn from storage	9,683,000	7,815,000	—19.29
Imports	8,769,000	8,231,000	—6.14
Miscellaneous production	2,768,000	3,325,000	20.17
Total motor fuel supply	235,969,000	242,928,000	2.95
Crude Oil Demand:			
Refinery Throughput—			
a. Domestic crude	419,034,000	436,715,000	4.22
b. Foreign crude	30,756,000	25,600,000	—16.76
Total	449,790,000	462,315,000	2.78
Exports	11,612,000	14,000,000	12.06
Used as such, losses, etc.	16,427,000	15,000,000	—8.69
Total crude oil demand	477,829,000	491,315,000	2.82
Crude Oil Supply:			
Domestic production	430,239,000	451,915,000	5.04
Imports	30,999,000	25,600,000	—17.42
Drawn from storage	16,591,000	13,800,000	—16.82
Total crude oil supply	477,829,000	491,315,000	2.82

Note—Per cent change is plus, unless marked (—) minus.

TABLE 3—SUMMARY TABLES, BY MONTHS, LAST SIX MONTHS, 1931
(Figures in thousands of barrels)

Motor Fuel Demand:	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Domestic	39,874	40,022	38,041	35,568	33,807	32,218	219,530
Foreign	4,972	5,048	3,400	3,507	3,068	3,403	23,398
Added to storage	.....	.....	.....	350	1,015	2,835	4,200
Total	44,846	45,070	41,441	39,425	37,890	38,456	247,128
Motor Fuel Supply:							
Refinery production	37,548	38,224	37,328	37,440	36,242	36,775	223,557
Drawn from storage	5,292	4,612	2,111	.....	.....	.....	12,015
Imports	1,411	1,604	1,382	1,485	1,168	1,181	8,231
Misc. production	595	630	620	500	480	500	3,325
Total	44,846	45,070	41,441	39,425	37,890	38,456	247,128
Motor fuel stocks—							
Beginning of mo.	42,053	37,761	33,149	31,038	31,388	32,403	
End of mo.	37,761	33,149	31,038	31,388	32,403	35,238	
Crude Oil Demand:							
Refinery throughput—							
a. Domestic crude	73,350	74,650	73,045	73,120	70,800	71,750	436,715
b. Foreign crude	4,300	4,400	4,150	4,300	4,150	4,300	25,600
Total	77,650	79,050	77,195	77,420	74,950	76,050	462,315
Exports	2,022	2,422	2,356	2,422	2,356	2,422	14,000
Used as such	2,528	2,528	2,444	2,528	2,444	2,528	15,000
Total	82,200	84,000	81,995	82,370	79,750	81,000	491,315
Crude Oil Supply:							
Domestic production	75,575	77,275	75,595	75,745	73,350	74,375	451,915
Imports	4,300	4,400	4,150	4,300	4,150	4,300	25,600
Drawn from storage	2,325	2,325	2,250	2,325	2,250	2,325	13,800
Total	82,200	84,000	81,995	82,370	79,750	81,000	491,315
Domestic prod. (bbls.) Daily average	2,438,000	2,493,000	2,520,000	2,443,000	2,445,000	2,399,000	2,456,000

TABLE 4—ESTIMATED GASOLINE SHIPMENTS AND PRODUCTION, BY REFINERY DISTRICTS, JULY 1—DECEMBER 31, 1931
(Figures in thousands of barrels)

Refinery district—	Shipments	Stocks* July 1, 1931	Stocks* Dec. 31, 1931	Change	Gasoline production	Crude throughput	Ratio gasoline to crude
East Coast	37,465	7,000	5,500	—1,500	35,965	92,200	39.0
Appalachian	9,305	1,634	1,300	—334	8,971	18,500	48.5
Indiana-Illinois-Kentucky	36,566	6,080	5,000	—1,080	35,486	58,200	61.0
Oklahoma-Kansas-Missouri	34,072	3,481	2,800	—681	33,391	57,600	58.0
Inland Texas	16,787	1,835	1,500	—335	16,452	32,900	50.0
Texas Gulf Coast	37,390	5,612	4,600	—1,012	36,378	72,800	50.0
Louisiana Gulf Coast	11,730	1,400	1,100	—300	11,430	28,575	40.0
North Louisiana-Arkansas	4,764	131	110	—21	4,743	10,540	45.0
Rocky Mountain	6,712	1,946	1,605	—341	6,371	10,110	63.0
California	36,581	13,924	11,723	—2,211	34,370	80,890	42.5
Total United States	231,372	43,053	35,238	—7,815	223,557	462,315	48.354

*Stocks east of California are those held at refineries; California stocks include total inventories of finished gasoline and engine distillate held by California companies within continental United States (stocks at refineries, water terminals, and sales distributing stations, including products in transit thereto).

NORTH AND WEST TEXAS

(Continued from Page 26)

385 bbls., total depth 3,049 feet. Harry Baldwin's No. 1 J. F. Lane, top pay 2,220 feet, initial production 10 bbls. per hour, total depth 2,325 feet.

Completions in Ranger District

Hood County

Sampson Oil Co.'s No. 1 Ables, temporarily abandoned, total depth 2,780 feet. Sampson Oil Co.'s No. 1 Peters, temporarily abandoned, total depth 728 feet. Hood County Oil Interests' No. 1 Leck, dry and abandoned, total depth 2,526 feet.

Johnson County

C. W. Windham's No. 1, temporarily abandoned, total depth 214 feet.

McCulloch County

Bryant and others' No. 1 Walker, temporarily abandoned.

Parker County

Cooke and Muller's No. 1 Williams and Pickens, temporarily abandoned, total depth 1,040 feet. Owens and Spurdock's No. 1 Gilley, temporarily abandoned, total depth 906 feet. Owens and others' No. 1 W. S. Scruggs, temporarily abandoned, total depth 500 feet.

NORTH TEXAS PRODUCTION
Week Ending August 23

Panhandle district—	
Carson County	5,181
Gray County	41,027
Hutchinson County	10,525
Moore County	765
Potter County	0
Wheeler County	322
Total production this week	57,820
Total production last week	59,220
Decrease	1,400
Wichita Falls district—	
Archer County	11,445
Baylor County	561
Clay County	532
Cooke County	1,367
Foard County	68
Haskell County	26
Jack County	2,021
Montague County	3,146
Throckmorton County	407
Wichita County	17,059
Wilbarger County	12,665
Young County	10,393
Total production this week	59,690
Total production last week	60,304
Decrease	614
Ranger district—	
Brown County	3,298
Callahan County	1,213
Coleman County	3,111
Comanche County	751
Palo Pinto County	376
Eastland County	2,772
Shackelford County	2,114
Stephens County	4,146
Total production this week	16,781
Total production last week	17,240
Decrease	459

SHIPMENTS THROUGH TRUNK LINES

Company, size, location—	
Atlantic, 10-in., Houston	14,702
Gulf, 10-in., Ranger	3,418
Humble, 2-8-in., San Angelo	36,800
Humble, 10-12-in., Comyn	49,923
Illinois, 2-8-in., Del Rio	26,644
Magnolia, 8-in., De Leon	7,407
Pasotex, 8-in., El Paso	8,877
Shell, 10-in., Healdton	39,695
Shell, 10-in., Houston	.....
Texas, 12-in., Houston	12,682
Total	200,148
Shipments to West Texas Refineries	
Burford Refining Co., Pecos	4,695
Cosden Refining Co., Big Spring	8,475
Coltex Refining Co., Colorado	7,993
Greatwestern Refining Co., Pyote	2,083
Continental Refining Co., Pyote	2,016
Wickett Refining Co., Wickett	321
Total	25,583
Shipments by Tank Car	
Shell Petroleum Corp., from McCamey	400
Total	400
Total average production	201,498
Total daily average distribution	226,121
Daily average from storage	24,623

Pipe Line Construction News

STANOLIND MAKES TENTATIVE PLANS TO INCREASE ITS PIPE LINE CAPACITY

By L. G. E. Bignell
Petroleum Engineering Editor

To aid as much as possible in relieving the unemployment situation this fall and winter, and to round out its pipe line capacity to meet present and future requirements in the Chicago district, the Stanolind Pipe Line Co. has made tentative plans to lay about 280 miles of 10 and 12-inch new line in the form of loops between stations from Payson, Okla., to Chicago terminals.

This is carrying out a number of details that were originally planned in 1928 only part of which were actually completed during the expansion program of 1928 and 1929. Since 1929 the system as completed then has served its delivery requirements to Standard Oil Co. (Indiana) and Sinclair Refining Co.'s plants satisfactorily, but there now seems to be an opportunity to increase the capacity of these lines if all conditions are favorable and to have the system more perfectly balanced to meet the needs of the Standard Oil Co. (Indiana) as the Stanolind Pipe Line Co. is now fully owned by that company.

The new project under tentative consideration involves the laying of about 24 short loops of 10 and 12-inch pipe between stations in Oklahoma, Kansas, Missouri and Illinois, these loops each averaging about 22 miles and totaling 190 miles of 12-inch and 90 miles of 10-inch pipe. This new line will add to the capacity of the present system about 15,000 bbls. per day.

The purchase of this pipe has somewhat delayed final decision in this matter because the pipe mills are quoting upon a new price schedule that makes the total cost of these improvements exceed the estimates prepared by the Stanolind Pipe Line Co.'s engineers, but it is hoped that this phase of the matter can soon be settled in a satisfactory manner to all concerned, and the definite decision to complete this work actually made.

The Stanolind Pipe Line Co. has in the past served the Sinclair Refinery Co. by delivering oil to its plants at Coffeyville, Kans., Kansas City, Mo., and East Chicago, Ind., but it no longer serves that company which now gets its oil for those plants from the Prairie Pipe Line system.

Even with this reduction in orders for crude the Stanolind Pipe Line Co. has during the past summer been required to handle practically full capacity of its system to its plants at Sugar Creek, Mo., and the Chicago district and, anticipating added requirements during the year 1932, it is making tentative plans to add to the capacity by looping its lines.

For pump station equipment it has been found by a careful check of the material available at various stations along the pipe line out of Wyoming the company will be able to move a sufficient number of pumps and engines to take care of the increase contemplated in the main line system between Kansas City and Chicago and possibly some of the stations west of Kansas City. There will be needed a few new pumps and engines for stations west of Kansas City but the details of those plans are not as yet worked out.

The improvement contemplates the use of 10 and 12-inch standard pipe or pipe of those sizes that is lighter than standard weight but of higher carbon contents and therefore stronger. The line will be welded throughout and be of modern construction when laid.

PHILLIPS TO BUILD CRANE-UPTON LINE

Phillips Petroleum Co. has begun preparations to lay a 3-inch welded pipe line from Crane City, Crane County, to McCamey, Upton County, in West Texas, a distance of 25 miles, to provide an outlet for natural gasoline extracted from gas at its absorption plant. The gasoline will be shipped by rail from a loading rack to be built on the Santa Fe at McCamey. The pipe line will cost around $150,000 and is scheduled to be in operation by October 1.

CONTINENTAL CONTRACT TO KELLY DEMPSEY CO.

CHICAGO, Aug. 24.—Continental Construction Co. has awarded construction contract for laterals in Texas Panhandle to Kelly Dempsey Construction Co. There will be 55 miles of 4, 6, 8 and 10-inch pipe.

PLAN 175-MILE LINE TO SERVE REGINA GAS

REGINA, Saskatchewan, Aug. 22.—The offer of the Power Corp. of Canada to supply Regina with natural gas having received the approval of the city council, the granting of the necessary franchise to be decided by a vote of the ratepayers. The corporation proposes to pipe the gas from the Bowdoin Field, Montana, a distance of approximately 175 miles, and estimate an expenditure of close to $8,000,000 on the project.

The company, according to its solicitor, W. H. McLaws, already own producing wells in the Bowdoin Field, and estimate the supply available in the area sufficient to supply both Moose Jaw and Regina for at least 30 years. The Saskatchewan capital is without a gas supply of any kind, and the Montana field is the nearest proven source possessing an adequate supply for the growing city's needs.

PANHANDLE-EASTERN COMPLETION ANNOUNCED

Completion of the Panhandle-Eastern pipe line, running 805 miles from the Panhandle natural gas fields of Texas to Rockville, Ind., was announced by Brokaw, Dixon, Garner & McKee, oil and gas engineers.

The main line with its 419 additional miles of lateral lines will serve approximately 75 cities and towns in Kansas, Missouri, Illinois and Indiana. It was built jointly for Missouri-Kansas Pipe Line Co. and the Columbia Oil & Gasoline Corp. at a cost of $40,000,000. It required 18 months to construct.

Its initial capacity will be 80,000,000 feet a day. As conditions warrant, the capacity may be doubled by the installation of compressor pumps.

SUSQUEHANNA GAS CO. EXPANDING OPERATIONS

HARRISBURG, Pa., Aug. 24.—The Susquehanna Gas Co., subsidiary of the Pennsylvania Power & Light Co., has applied to the Public Service Commission for authority to supply natural gas in eight additional counties in southern and eastern Pennsylvania. The counties in which rights are applied for are: Cumberland, Juniata, Lancaster, Lehigh, Montgomery, Perry, Pike and Susquehanna.

At the same time, the company asked approval of the extension of its territory of supply to include drilling and producing rights in Cameron, McKean and Wayne Counties and authorization of the enlargement of its pipe line system to connect all points of supply with the places where natural gas is to be supplied. The operations of the natural gas company, the application states will be financed by advances from the Pennsylvania Power & Light Co.

The Susquehanna Gas Co., originally organized by Pennsylvania Power & Light officials under the name of Pennsylvania Natural Gas Co., now has the right to produce natural gas in eight counties: Potter, Tioga, Bradford, Susquehanna, Clinton, Lycoming, Sullivan, and Wyoming. It has brought in several large producing wells in the Tioga area and has completed a large part of a 40-mile pipe line which will connect the Tioga Field with the artificial gas mains of the Pennsylvania Power & Light Co. at Montoursville, near Williamsport.

LINE FROM MESA FIELD TO OCEAN TO BE LAID

LOS ANGELES, Calif., Aug. 22.—Application of Irvine Oil Co. to lay a 7-mile pipe line from the Mesa Field, near Santa Barbara, to the ocean, near Elwood, has been approved by the State Railroad Commission. The Irvine Oil Co. has signed a contract with the International Petroleum Co. of San Francisco to deliver 40,000 bbls. of crude a month. The latter company has a large number of fuel oil stations along the west coast of Mexico and has purchased an old tanker from Union Oil Co. for delivering its products to the stations.

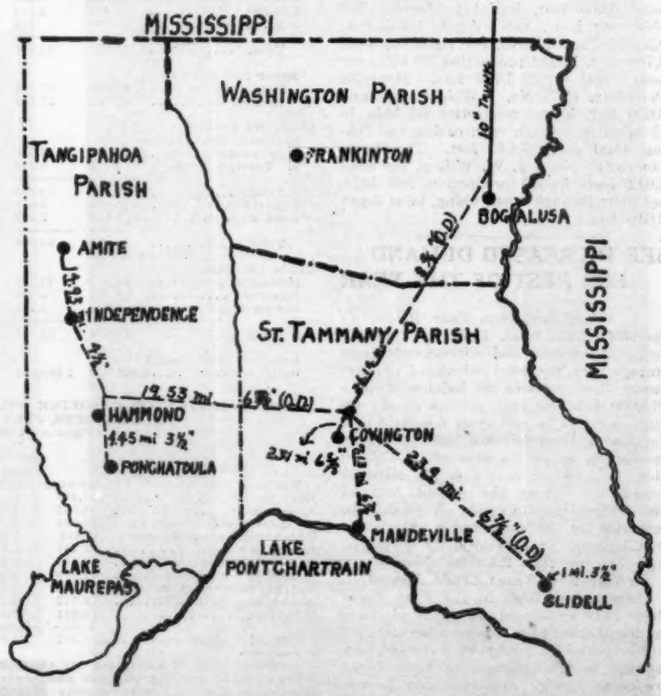
Development of Mesa area is expected to be speeded up. Carroll Petroleum of Santa Monica has taken over the Fellowship tract and part of the Channel Oil Co. lease and plans to drill 11 wells, with two already started.

UNITED GAS CO. EXTENDING ITS SYSTEM IN EASTERN LOUISIANA

HOUSTON, Tex., Aug. 24.—United Gas System has completed right of way and is beginning to move in pipe and equipment for the laying of a new gas transportation system in eastern Louisiana. The project, which will be an extension of the company's Jackson, Miss.-Pensacola, Fla., system, acquired some time ago from the Southern Natural Gas Co., will involve the laying of approximately 100 miles of pipe ranging in size from 8⅝-inch (O.D.) down to 3½-inch.

The line will pipe gas to six of the more important towns of that part of the State which lies in the corner of Mississippi, including Covington, Slidell, Mandeville, Hammond, Ponchatoula and Amite. Distribution in these towns will be by local companies with the United Gas Co. supplying the gas at the city gates.

The main line, consisting of 8⅝-inch (O.D.) pipe, will extend southwesterly from a point north of Bogalusa, La., to a point north of Covington, as shown on an accompanying map, a distance of 26.14 miles. Bogalusa is the southern terminus of a 10-inch branch line off the Jackson-Pensacola trunk system. North of Covington the line splits, one 6⅝-inch line extending southeasterly 23.9 miles to north of Slidell, another similar line reaching into Covington, while a third line extends westward to Hammond, a distance of 19.53 miles. At Hammond is another split, 14.93 miles of 4½-inch line extending northward to Independence station and Amite and 4.45 miles extending southward through Hammond to Ponchatoula.



Map of new gas transportation system of United Gas Co. in eastern Louisiana.

The St. Louis Line
The Denver Line
The Memphis Line
The Empire Line
The Inter-State Line
The Atlantic Line
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Production From Oklahoma Steady

Phillips Petroleum Co. Posts $1 for Crude Oil in State. Exemption for Water Wells Denied in Oklahoma City Field

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

Monday, August 24, Phillips Petroleum Co. announced it would pay $1 for 40 gravity crude oil at the wells in Oklahoma and 2 cents less for each degree downward, but named no grade at which its prices stopped in their downward trend. According to the Phillips schedule 29 gravity oil would bring 78 cents. The Texas Company and others on Saturday, August 22, posted prices of 46 cents for below 29 gravity, 48 cents for 29 gravity, with 2 cents added for each degree upward to and including 40 degrees and above at 70 cents. The Phillips Petroleum Co. is the first company to post $1 for oil since Governor Murray's shutdown order was put into effect.

The State's daily average production shows an increase over the previous week, amounting to approximately 5,400 bbls. a day. The daily average for the week ending August 22, was approximately 269,340 bbls. a day, compared to 263,940 bbls. the previous week. The total production from the Oklahoma City Field for the same seven days was 63,660 bbls., a daily average of 9,094 bbls. Included in this week's Oklahoma City production were nine new wells, which flowed 48,085 bbls. initially. The old wells reported only 15,577 bbls. for the week, most of which was crude gasoline.

The Oklahoma City Field now has a total of 825 completed wells and 27 others are drilling. The total pipe line shipments from the field in the past week were 77,930 bbls. of oil or a daily average of 11,133 bbls. Several new locations have been staked but the development work is being held up until increased crude oil prices have been posted. On the southwest edge of the field where an extension well was completed last week it is believed a good play will develop after the shutdown order is lifted. Some express the opinion that approximately 200 more wells may be drilled on the west side of the field to the Wilcox sand horizon which is expected to extend along that part of the pool.

The recent increase in crude oil prices which makes the top grade 70 cents a barrel for Oklahoma crude oil, which was posted by The Texas Company and most other companies on Saturday, August 22, will greatly benefit the stripper wells in the State, which are exempt from the military shutdown.

During the week several offers for crude oil from the Oklahoma City Field were made, the prices ranging from 77 cents to $1 a barrel. The companies making the offers expressed the desire to buy the oil from wells owned by their subsidiary companies. Governor Murray, to date, has refused to allow any of the companies to open its wells.

May Order Unitization

Some express the opinion that before the executive order is lifted the Oklahoma Corporation Commission may announce a program of unitizing the prorated areas in the State, classifying the wells by sands from which they produce. This plan may cause some discussion between the different oil companies. It is also believed it will take considerable time to unitize the present producing areas on a basis that would be satisfactory to all operators. Before the Oklahoma City Field could be operated under the unit plan a considerable time must be spent in making a decline curve of all the producing wells. Each company's acreage would be considered, and the size of the wells. The relation of the leases on the structure and the thickness of the producing sands are believed to be important considerations. The Wilcox sand varies from 30 to 150 feet in thickness in different areas.

Propose State-Paid Umpires

An order directing that oil proration umpires be on the State payroll, is expected to be filed by the Oklahoma Corporation Commission, not later than October 1. The umpires have been paid by the major oil companies since proration began in 1927. It is expected the future enforcement of the State proration laws will be entrusted entirely to a statewide umpire, to be appointed by the Corporation Commission with the approval of Governor Murray.

Paul Walker, chairman of the Oklahoma Corporation Commission favors the plan. The state-paid umpire feature may be included in the unitization proposal which also contemplates installation of meters on every well to check oil runs, appointment of umpires by the commission and the assessment of individual oil companies for the cost of meters on wells. Some believe the appointment of umpires and the meter system of checking the flow of oil may be in operation before the Oklahoma City Field and the other prorated areas in the State are opened.

Governor Murray has stated that the fields would not be opened until new umpires were ready for service, provided two members of the Oklahoma Corporation Commission would agree to file the order for the enforcement of the new suggestions.

Under the present system, the Corporation Commission, for the enforcement of the proration laws depends on reports submitted by the companies themselves, with verification by the umpires.

School Land Leases

Oil and gas leases on state school lands, sold by the State in 1926 will expire in the fall, and due to the conditions in the oil industry it is improbable that many will be renewed at the present time. A majority of the leases will terminate with the properties untouched by test wells. In 1926, a total of $400,000 was paid for leases in Pottawatomie County, and six producing wells were completed. One company paid $28,000 for a lease on 160 acres in Pottawatomie County in 1926, when the oil boom was at its height.

If the State does lease its state school land again, it has set a minimum of $2 an acre, which figure was set by the Corporation Commission years ago. Since the prorated fields in Oklahoma and the East Texas Field have been shut in by martial law leasing activity has started again in Oklahoma.

96 Wells Drilling

A survey of the drilling activities in the State reveals that only 96 tests were under way at the close of the week ending August 17. The drilling of new tests is not hampered by Governor Murray's shutdown order, which regulates production after the wells are completed. The majority of the active drilling tests are in the Oklahoma City area. The state government has placed a curb on the flow of oil after the wells are on production, but have made no attempt to restrict the drilling of any test wells. It is believed the generally depressed condition of the crude oil market has been responsible for the decline in the drilling activities.

Of the 96 tests drilling in the State 46 are in the Oklahoma City Field. The survey does not include Osage County, which, however, is very quiet.

Part of the tests included in the Oklahoma City Field as drilling are tests that are taking the 65-day shutdown period, officially required of all tests before being completed. After the 65-day shutdown period the tests are allowed to flow open for eight hours before being shut in under the governor's executive order.

Six tests were completed in the State during the same week and there were 171 shutdown tests, exclusive of the wells affected by the governor's shutdown order. In the Oklahoma City Field there were 41 tests shut down, and 44 in the Okmulgee district. In the Enid district 13 operations were shut down. In the southern part of the State in the Ardmore and Duncan areas, there were seven tests drilling and 38 shut down.

The following is a list of operations by districts, for the same week: Bristow-Cushing, 10 drilling, 21 shut down, one completion; Enid, none drilling, 13 shut down, no completions; Seminole-Holdenville, 8 drilling, 14 shut down, no completions; Oklahoma City, 46 drilling, 41 shut down, no completions; Okmulgee-Muskogee, 25 drilling, 44 shut down, 3 completions; Ardmore, 4 drilling, 17 shut down, one completion; Duncan, 3 drilling, 21 shut down, one completion.

Exemptions Asked For

The application of the five companies in the Oklahoma City Field to open their wells that are making water was denied by Cicero I. Murray. The companies stated that the water encroachment would ruin the wells if they remained shut in. Cicero Murray stated that no wells will be opened except new completed wells, reconditioning or gas wells.

The application to exempt 103 oil wells in the Oklahoma City Field from the shutdown order was filed with Cicero I. Murray August 17.

There are approximately 815 wells out of a total of 825 wells in the Oklahoma City Field that are shut down, the difference being the number that have been producing daily. The companies asking exemption and the potential production is as follows: Shell Petroleum Corp., four wells, 3,712 bbls. of oil and 11,200 bbls. of water; Indian Territory Illuminating Oil Co., 36 sand wells, 253,598 bbls. of oil and 192,147 bbls. of water: same company, 35 Silicious lime wells, 89,855 bbls. of oil and 154,116 bbls. of water; Mid-Kansas Oil & Gas Co., 2 wells, 130 bbls. of oil a day and 2,700 bbls. of water. Wirt Franklin Petroleum Corp. has 14 wells making from 2 to 60 per cent water and Cromwell-Franklin Oil Co. has 12 wells making from 9 to 45 per cent water. Some listed as making 100 per cent water are shut down.

The Water Situation

Wells which the various companies wish to open and produce because they make water are as follows:

Shell Petroleum Corp.

No. 1 Petty, 1,342 bbls. oil, 4,200 bbls. water; No. 6 Petty, 1,352 bbls. oil, 400 bbls. water; No. 7 Petty, 943 bbls. oil, 3,000 bbls. water; No. 5 Petty, 25 bbls. oil, 5 bbls. water.

I. T. I. O. Sand Wells

No. 1 Butterfield, 7,796 bbls. oil, 12,000 bbls. water; No. 1 Carrico, 5,508 bbls. oil, 229 bbls. water; No. 2 Carrico, 3,338 bbls. oil, 34 bbls. water; No. 1 Coppinger, 8,029 bbls. oil, 3,953 bbls. water; No. 2 Ferndale 2,767 bbls. oil, 15,000 bbls. water; No. 3 Ferndale, 6,131 bbls. oil, 836 bbls. water; No. 4 Ferndale, 13,933 bbls. oil, 9,292 bbls. water; No. 5 Ferndale, 1,914 bbls. oil, 5,396 bbls. water; No. 1 Funk, 8,426 bbls. oil, 6,894 bbls. water; No. 1 Habeggar-Precure, 5,041 bbls. oil, 498 bbls. water; No. 1 H. W. Jones, 19,792 bbls. oil, 9,894 bbls. water; No. 4 H. W. Jones, 2,801 bbls. oil, 243 bbls. water; No. 1 Mae Knox, 15,358 bbls. oil, 8,267

(Continued on Page 104)

WILDCAT OPERATIONS IN OKLAHOMA

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location— Remarks:
Smith Brothers' No 1 Forbes, SE cor. NW NW, Sec. 12-27-11w ..... Shut down 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE, Sec. 14-24-11w ... Shut down 5,502 ft.

ATOKA COUNTY

Campbell's No. 1 Baird, NW NE SW, Sec. 31-1-13 ..... Rig.
Edgerton Edwards' No. 2 Rowland, SE NE NW, Sec. 6-1-15 ..... Rig.

BECKHAM COUNTY

Price-McFann's No. 1 Webster, C SW SW, Sec. 34-8-26w .. T. D. 2,344 ft.; plugged back to 1,850-1,900 ft.; 1,500,000 ft. gas.
Mid-Continent's No. 1 Schaff, C NE SW, Sec. 22-11-22w .. Waiting on cement to set 430 ft.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW, Sec. 17-2-22w ..... Shut down 2,550 ft.
White et al's No. 1 Green, SW cor., Sec. 34-10-24w ..... Shut down 3,575 ft.

BLAINE COUNTY

Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 13-19-10w ..... Shut down 5,115 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w ..... Shut down 1,115 ft.

COAL COUNTY

McCraw Oil Co.'s No. 1 Ward, NE SE, Sec. 35-1-8 ..... W.O.C.S. 1,846 ft.
Whitney et al's No. 1 Miller, SE NE, Sec. 10-2-8 ..... Shut down 760 ft.

COMANCHE COUNTY

G. W. Stogner's No. 1 Doebel, C SW SW, Sec. 3-3-9w .... Shut down 1,450 ft.

LE FLORE COUNTY

H. E. Dowd et al's No. 1 Unknown, SE NE, Sec. 17-3-23 .. Drlg. 1,020 ft.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW, Sec. 9-24-4w .. Shut down 5,850 ft.

GARVIN COUNTY

Malarnee et al's No 1 Phillips, NE SW SE, Sec. 24-2-2w .. Shut down 4,830 ft.
Skinner's No. 1 Elrod, SW cor., Sec. 13-2-3 ..... Shut down 1,120 ft.

GREER COUNTY

Dovell et al's No. 1 Capell, NW cor., Sec. 1-7-22w ..... 5,000,000 ft. gas 1,455-65 ft.; T. D. 1,760 ft.
French's No. 1 Murphy, SW NW, Sec. 23-7-21w ..... Shut down 1,645 ft.

HARPER COUNTY

Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW, Sec. 14-26-24w ..... 26,000,000 ft. gas 5,350-5,400 ft.; T. D. 5,539 ft.; shut down; sprayed 50 bbls. gasoline.

HASKELL COUNTY

Bowers Oil & Gas Co.'s No. 1 Black, Kent Townsite, SE SW SW, Sec. 31-8-20 ..... 1,000,000 ft. gas 710-50 ft.; T. D. 850 ft.
Ault et al's No. 1 Harrison, CWL SE NE, Sec 14-9-19 ..... Shut down 650 ft.
Ault et al's No. 1 Hall, NW SW SW, Sec. 14-9-19 ..... Shut down 2,000 ft.
Ault et al's No. 1 Hall, SE NW, Sec. 25-9-19 ..... Shut down 200 ft.

(Continued on Page 77)

Kansas' Biggest Field Ordered Shut In

Public Service Commission, With Approval of Governor Woodring, Makes Order, Pending Hearing September 24

By W. A. Spinney
Staff Correspondent, Kansas Fields

The Public Service Commission of Kansas announced Saturday, August 22, that a 100 per cent shutdown was ordered for the Ritz-Canton Field in McPherson County, to become effective at 7 a.m. August 24. The field is the largest flush area in the State. The potential of the field on August 15 was estimated at 113,000 bbls. a day. A new potential gauge was being taken of the area by pumping the wells, starting August 17 and continuing to August 24. The shutting down of the field came as a surprise to purchasers, refiners and producers as it was entirely unexpected.

Governor Woodring said he was in full accord with the efforts of the governors of Oklahoma and Texas and that he considered a dollar a barrel the minimum price oil should be sold for at the present time.

The order closing the Ritz-Canton Field will affect approximately 20,000 bbls. a day of production, which is the pipe line outlet of the field at the present time and is one-fifth of the State's daily production. The shutting in of the Ritz-Canton Field followed a previous order preventing the re-opening of the Schurr Pool, near Raymond in Rice County, which has been shut in for the last eight months.

The Public Service Commission announced it hoped a general shutdown order would not be necessary in the State.

The order was made effective pending a hearing to be held at Wichita, September 14, where the complaint will be considered seeking to shut down the entire State, which it is estimated would affect approximately 50,000 bbls. a day, with exemption for wells of less than 15 bbls. a day.

At the commission's headquarters it was stated that Governor Woodring expressed the hope that the Ritz-Canton shutdown order would be obeyed promptly and that it would be unnecessary for him to take steps in the closing of the pool. The commission believed the Ritz-Canton Pool was being connected rapidly with pipe lines by purchasers unable to obtain oil at ruinous prices in Oklahoma or Texas since those two states have shut down all flush production, the taking of crude oil from the Ritz-Canton area having greatly increased, thereby tending further to depress the market price of crude and to injure the landowners, producers and the State of Kansas. The commission stated it had been informed of irregularities in the taking of oil from the field; that, instead of taking the 17 per cent ratably of the oil from the common source, 35 per cent was being taken. The order was issued under the complaint filed by W. H. Lassen, Wichita, vice president of the Aladdin Petroleum Corp., with production in the Ritz-Canton area. The complaint has been set for a hearing September 14. The shutdown order was signed by J. W. Greenleaf, commission chairman, Thurman Hill and C. W. Campbell.

Kansas production for the week ending August 22 shows an increase of approximately 2,000 bbls. a day, mostly from the Ritz-Canton area. The daily average for the same seven days was approximately 104,200 bbls.

A member of the Kansas Public Service Commission announced Friday, August 21, the commission was preparing an order directing that the production in the Schurr Pool, near Raymond, in Rice County, remain shut in. The first oil in the area was found about 18 months ago, and it has been shut in since January 1, 1931. The only pipe line into the field is the Prairie Pipe Line Co.'s line and when the Prairie Oil & Gas Co. withdrew as a purchaser January 1, 1931, the production in the field was shut in. All operators agreed to shut in their wells at the time. It was reported that one of the purchasing companies planned to take approximately 15,000 bbls. a day from the area. Governor Woodring said he would not allow flush pools in Kansas to be opened at the present time to hamper the situation in Oklahoma and Texas.

Increase in Crude Prices

Crude prices for Kansas have been increased in recent weeks from 18 cents a barrel to 70 cents per barrel with one independent refiner paying 60 cents for 44 gravity crude and above. The latest increase was posted August 22.

It is estimated that less than 900 wells in the State would be affected out of a total of approximately 22,000 wells, under a general shutdown order, which the commission could issue under the complaint filed by W. H. Lassen. The wells involved, it is believed, accounted for approximately 47,000 bbls. of oil a day of the State's present daily production of approximately 102,000 bbls. and were located in seven different counties as follows: Edwards, 3 wells; Ellis, 20 wells; Harvey, 5 wells; McPherson, 158 wells; Rice, 33 wells; Sedgwick 293 wells and Sumner, 179 wells.

Stripper wells would be exempted under the proration law enacted by the legislature last winter and effective in the State less than three months. The proration law provided exception for wells of 15 bbls. a day or less daily production. It is believed that only wells now producing in the seven counties would be involved and some of these would be exempt under the 15-bbl. rule. It is believed that the majority of the wells in the seven counties have production now averaging above 15 bbls. daily.

Lassen's Complaint

In the complaint W. H. Lassen stated that he is the owner of McPherson County production. He stated that the manner in which the oil is being produced in the Ritz-Canton area in McPherson County and other fields in the State is wasteful and that the oil and gas resources of Kansas are being wasted and exhausted. He also stated that he believed there is an unfair taking of and unreasonable discrimination in taking of oil from a common source of supply.

Refiners May Shut Down

The crude shortage in Kansas, which has developed since the governors of Oklahoma and Texas shut in the flush fields in those two states, is believed to have reached a stage, that several of the independent refiners may be forced to suspend operation of their plants temporarily.

As the result of the shortage of crude oil, announcements were made during the past week of several new pipe line projects into the Ritz-Canton Field, which has a potential of approximately 113,000 bbls. a day with an outlet for 20,000 bbls. a day. The outlet will be more than doubled when the pipe lines are completed. The proposed pipe lines and those under construction are: The Phillips Petroleum Co.'s 6-inch pipe line from Greenwood County to the Ritz-Canton area; the Skelly Oil Co.'s new pipe line from the Voshell Pool to the Ritz Canton Field; and the Globe Oil & Refining Co.'s new combination 6 and 8-inch line from the company's refinery at Blackwell, Okla., to the Ritz-Canton Field by the way of Wichita.

These new pipe lines will have a capacity of approximately 32,000 bbls. a day, increasing the outlet of the Ritz-Canton area to approximately 47,000 bbls. daily. The Globe Oil & Refining Co.'s new pipe line alone will give the field an outlet for 20,000 bbls. of oil a day and will make the company the largest purchaser of crude in that district. The company's producing subsidiary, the Lario Oil & Gas Co., has considerable acreage in the field and also has 17 completed oil wells that have a rated potential of 35,000 bbls. a day. The new Globe Oil & Refining Co. pipe line will purchase oil ratably from the Ritz-Canton Field.

Field Operations

The Eastborough Pool was extended during the week by the completion of the second well in the deep formation. Magnolia Petroleum Co.'s No. 5 Wheeler, in approximately SW cor. NE NE Section 19-27-2, an old chat producing well that was drilled deeper, started flowing 36 bbls. of oil an hour from the deep pay at 3,255-59 feet. In the first 24 hours the well made 922 bbls. of oil. The well filled up rapidly and began flowing in a short time. It extends production in the deep Simpson formation one location to the east. The discovery Simpson sand well was completed by the Derby Oil Co. It was No. 6 Eastborough, which was also drilled deeper from the chat formation. It made around 600 bbls. the first 24 hours and extended the deep sand a half mile to the north. It logged lower than the Magnolia Petroleum Co.'s well, finding the Simpson sand at 3,285-88 feet. The Magnolia Petroleum Co.'s No. 6 Wheeler, a twin to No. 4 Wheeler, a location south of the company's No. 5 Wheeler, was drilling at 1,200 feet. It will be drilled to the Simpson sand formation. The Magnolia Petroleum Co. owns considerable acreage east of the new well in Sections 17 and 20-27-2, on which only a few wells have been drilled to the chat formation up to this time, and which appears to be good for deeper production.

The Ritz-Canton-Decker Field in McPherson County, in the central part of the State, has been extended to cover approximately 11,500 acres since it was opened about two years ago, and includes all or parts of about 18 sections of land. The most recent well to extend the production in the field is the Derby Oil Co.'s No. 1 Unruh, SE cor. Section 26-19-2w, on the extreme west side of the field, which cored the Viola lime at 3,386-96 feet, where a showing of oil was found. The well is the most westerly in the field to show oil from the Viola lime formation.

It is estimated that the Ritz-Canton-Decker Field has a total of 1,152 proven locations at the present time with only 184 oil wells, gas wells and drilling tests completed or under way.

The Morgan Petroleum Co. announced it made a location for a test on the northwest edge of the townsite of Canton. The test is No. 1 Brucker, on a 10-acre lease in approximately the NW cor. NE Section 21-19-1w.

In the Decker gas area, Emrich Royalty Co.'s No. 1 Severton, NE cor. SE SE Section 9-19-2w, a half mile west of production in the area, was being drilled deeper after finding 10 bbls. of oil an hour and 1,000,000 feet of gas in the chat from 2,941-48 feet.

Butler County

Magnolia Petroleum Co.'s No. 67 Koog-

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WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless marked otherwise)

Company, farm and location—	Remarks:
BARTON COUNTY	
Syndicate Oil Co.'s No. 1 Boertz, NW SE SE Sec. 13-18-12w	Shut down 2,440 ft.
Skelton Oil Co.'s No. 1 Ott, C SE SE Sec. 16-19-14w	Drlg. 2,595 ft.
McCool et al's No. 1 Tsern, NW SE NE Sec. 12-20-11w	Shut down 1,600 ft.
CHASE COUNTY	
Borden et al's No. 1 Atkinson, NW SE Sec. 15-18-7	Rig on ground.
CLAY COUNTY	
Crystal Oil et al's No. 1 Tivier, SW cor. Sec 19-8-2	Shut down 2,700 ft.
COFFEY COUNTY	
Heyburg's No. 1 Kroft, SE SW SE Sec. 30-22-14	Shut down 1,565 ft.
COWLEY COUNTY	
Fisher et al's No. 1 Hurt, C SW SE SE Sec. 11-34-3	Rig.
DICKINSON COUNTY	
Severs et al's No. 1 Lavengood, NE SW Sec. 13-13-2	Drlg. 4,170 ft.
ELLSWORTH COUNTY	
Keyes Bros.' No. 1 Gregory, SW cor. Sec. 23-16-9w	Drlg. 2,320 ft.
Alyward et al's No. 1 Stratman, SE NW SE Sec. 1-17-10w	Silicious 3,255-71 ft.; 117 bbls. 2 hrs.; shut in; est. 2,000 bbls.; no pipe line connections.
Aladdin Pet.'s No. 1 Stoddenberg, C SW Sec. 22-16-10w	Silicious lime 3,332-47 ft.; est. 1,500 bbls. a day; shut in.
Milton et al's No. 1 Kester, SE NE Sec. 6-14-9w	Underreaming 6-in. csg.; T. D. 3,350 ft.
FORD COUNTY	
Carter Oil Co.'s No 1 Everett, C NE Sec. 22-29-21w	Drlg. 5,647 ft.
Swain et al's No. 1 Taylor, C NW Sec. 21-25-24w	Shut down 5,105 ft.
GRAHAM COUNTY	
Schleimeyer et al's No. 1 Clark, SW NE NE Sec. 11-9-25w	Shut down 4,648 ft.
KINGMAN COUNTY	
Skelly Oil Co.'s No. 1 Miles, NE cor. Sec. 30-27-10w	1,635-40 ft. 2,000,000 ft. gas; at 2,005-20 ft. 6,000,000 ft. gas; at 2,133-42 ft. 3,000,000 ft. gas; showing oil 3,385 ft.; T. D. 3,441 ft.; shut down; estimated at 600 bbls. a day.
HARVEY COUNTY	
Liggett et al's No. 1 Davis, SW SE NE Sec. 7-24-1	Rig.
J. F. Flannigan's No. 1 Sheridan, C SW Sec. 32-22-1	Drlg. 2,455 ft.
LINCOLN COUNTY	
Buck et al's No. 1 Schulz, C SE NE SW Sec. 19-11-6w	Rig on ground.
MARION COUNTY	
Midwell's No. 1 La Master, NW cor. Sec. 31-22-4	Abandoned 650 ft.
MORTON COUNTY	
Hydraulic Oil Co's No. 1 State Land, NW SE Sec. 22-34-43w	T. D. 3,640 ft.; shut down.
MORRIS COUNTY	
Allender et al's No. 1 Wycoff, C SW SE Sec. 5-17-7	Shut down 50 ft.
Urschel et al's No. 1 Bersuch, NW SE NW Sec. 10-17-7	Machine.
Hankerson et al's No. 1 Cessman, SW SE Sec. 24-16-9	Fishing 2,620 ft.
NORTON COUNTY	
Richards et al's No. 1 Colby, Sec. 17-4-21w	Rig.
OSAGE COUNTY	
Briggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15	Shut down 1,050 ft.
RAWLINS COUNTY	
J. G. Durham et al's No. 1 Weaver, SE cor. Sec. 3-2-35w	Shut down 3,501 ft.

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More Activity in Claiborne Parish Area

Sugar Creek Field Looked Upon as Proven Gas Field With Oil Expected from Trinity Horizons. Deep Test in Smackover

By J. R. Crumpton
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Aug. 24.—One oil well and two gas wells out of five completions comprised the total of new production in this division during the week. In the Zwolle Field of Sabine Parish, the Magnolia Petroleum Co.'s No. 1 Peterson, Section 10-7-11, was completed at 2,532 feet with initial production of 112 bbls. daily. This well tested 25 bbls. daily from 2,432 feet, was deepened to the completed depth where 2-inch tubing was set with packer, resulting in the small increased flow.

In the Trinity gas producing field of Rhodessa, northwest Caddo Parish, the United Gas Public Service Co.'s No. 1 M. K. Smith, Section 33-23-16, was quite a disappointment in its initial flow. The well, completed at a depth of 5,690 feet, about 200 feet deeper than other producers in this field, gauged only 3,180,000 feet of gas but with a high rock pressure of 2,275 pounds. The test is about one-half mile north of proven production, and the results indicate it is on the northern extremity, making it likely the gas area will extend southwest and west, probably into Cass County, East Texas. This company had better results in the Richland Field, completing its No. 1-A Wayne Land & Timber Co., Section 24-17-5e, with an estimated initial flow of 35,928,000 feet of gas from 2,428 feet. As reported last week, the Community Gas Co.'s No. 1 Swearinger, Section 34-6n-1e, in Hinds County of the Jackson Field in Mississippi, turned out to be one of the best gassers completed in that area, gauging 41,429,000 feet from a total depth of 2,488 feet. The operators of this well seem to be well protected from offsets as the test is in an exclusive residential section of the city of Jackson with the nearest production practically 1 mile away.

Two dry holes were reported, H. W. Perritt abandoning his No. 4 Bowman-Hicks, Section 2-7-12, in the proven area of the Zwolle Field at 2,580 feet. The well tested a small show of oil at 2,502 feet, but failed to make a commercial producer when deepened. In Shelby County, East Texas, the Sloan Prospecting Co.'s No. 1 Sanford, M. M. Van Survey, was dry and abandoned at 3,797 feet.

Drilling More Active

Drilling in this division continues more active, both in wildcat territory and the proven areas. Further development of the Trinity gas producing horizon in the Sugar Creek Field of Claiborne Parish is indicated by the commencement of another well in that area. The United Gas Public Service Co. is rigging up on its No. 1 Treadwell & Hawk in Section 6-19-5w. The well is in the immediate proven area of the field and if successful will be the sixth gasser from the Oolitic lime around the 4,200-foot level of the upper Trinity. All previous drilling operations in this field have been carried on by the Triangle Drilling Co., including the discovery well. Since that time a one-third interest in production and the block of leases was sold to the United Gas Public Service Co., and another one-third interest sold to the Standard Oil Co. of Louisiana. The three concerns operate a gasoline plant in that vicinity to take care of the highly saturated gas produced.

The five wells completed to date in the Trinity formation of Sugar Creek had an average initial flow of 40,000,000 feet of gas which produces about 1,200 gallons of gasoline per million feet. The operators in this section look upon the Sugar Creek area as an already proven gas field, the potential of which has not been estimated, and also expect oil production from some of the Trinity horizons. There has been nothing drilled to date in these horizons to limit the productive area of this field, and no determination can be made from the present wells as they are within a small radius of each other. An important fact, though, is that all of the wells already drilled to the pay zone have hit it at practically the same sub-sea depth and there is approximately 200 feet of productive closure in the Oolitic lime pay. Definite showings of petroleum have been found in one of the wells and several others have drilled deep enough into the gas pay to show oil stains in the gas rock. It is definitely assured that the Trinity formations will furnish the future oil production in North Louisiana and the Sugar Creek Field is expected to fulfill this prophecy.

Caddo Parish Gas Well

A possible gas producer from the Blossom sand is indicated by a strong gas show from 2,056 feet in W. P. Wallace, trustee's No. 2 Cunningham-O'Conner in Section 15-17-14, Caddo Parish. The test is in the southwestern outskirts of the city of Shreveport, near the state fair grounds. Six-inch casing is being set at 2,035 feet for a test. Other drilling operations in North Louisiana follows: De Soto Parish, S. S. Meek, trustee's No. 1 Wagner, Section 5-12-14, drilling at 2,845 feet, and Rellitt Oil Co.'s No. 1 Cannon heirs, Section 12-11-16, drilling in sandy shale at 1,914 feet. The Gulf Refining Co. is rigging up on its No. 1 Tremont Lumber Co., Section 10-9-2e, in La Salle Parish; in Union Parish, Dan Brooks is drilling at 1,080 feet on his No. 1 Douglas, Section 9-22-2w, and the Pelican Natural Gas Co. has set 12-inch surface casing at 180 feet in its No. 1 Long Bell Lumber Co. in Section 3-1n-3w in Rapides Parish.

ARKANSAS

Resumption of drilling in the Lion Oil Refining Co.'s No. 9-A G. P. Hayes, Section 4-16-15, Union County, Arkansas, was the only outstanding development in that State. This is the first deep test in the Smackover Field and has been followed with interest. The well has been shut down for several weeks at 5,021 feet after completing the contract depth of 5,000 feet, but reports are that arrangements have been made to go to a total depth of 6,000 feet. The test is drilling at 5,138 feet in red sand and gypsum. Another deep test that has been watched closely is the first for Harrison County, East Texas, the Ryan Consolidated Co.'s No. 1 Key, E. Carroll Survey, about 15 miles south of the town of Marshall. Although the contract depth on this well was 5,300 feet, the operators are proceeding and latest reports give them drilling in Oolitic lime at 5,758 feet.

MISSISSIPPI

Mississippi's deep test, the Ohio Oil Co.'s No. 1 Cantrell, Section 16-15-5, in Clay County, is drilling at 4,649 feet. A reported gas show recently with 7-inch casing to be set for a test evidently did not materialize. A wildcat in Clark County, the Gulf Refining Co.'s No. 1-A Long Bell Lumber Co., Section 10-2n-16w, is drilling at 624 feet, and in Jefferson County, Stokes and Cleve Love's No. 1 Phillips, Section 14-10n-2w, is drilling at 2,160 feet. A wildcat in Noxubee County, Thompson & Donohue's No. 1 Donohue, Section 25-16n-17e, is reported to be moving in cable tools to finish the test from 1,585 feet.

Daily Average Runs

A net decrease of 865 bbls. was registered in the North Louisiana and Arkansas fields for the week. North Louisiana declined 915 bbls., but Arkansas gained 50 bbls. Daily average runs for the several pools were:

NORTH LOUISIANA	
Caddo, light	5,990
Caddo, heavy	1,575
Homer	2,650
Haynesville	5,100
DeSoto and Red River	2,310
Elm Grove	395
Cotton Valley	290
Urania	3,220
Pleasant Hill	370
Sarepta-Carterville	925
Zwolle	6,450
Holly	460
Total North Louisiana	29,735
Total previous week	30,650
Decrease	915
ARKANSAS	
El Dorado	3,200
Smackover, light	3,130
Smackover, heavy	26,520
Stephens	700
Nevada	1,000
Lisbon	520
Champagnolle	2,120
Urbana	250
Total Arkansas	37,440
Total previous week	37,390
Increase	50
Total both states	67,175
Total previous week	68,040
Decrease	865

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Rotary operations unless otherwise designated)

NORTH LOUUISIANA

BIENVILLE PARISH

Company, farm and location—	Remarks:
Arcadia Drlg. Co.'s No. 1 Atkins, 175 ft. W, 120 ft. N, SE cor. NW NE, Sec. 37-18-6	S. D. 1,635 ft.

BOSSIER PARISH

Andrews & Davlin's No. 1 Nattin, 100 ft. N, 250 ft. W, C, Sec. 15-22-14	Flowing by heads 3 bbls. 2,890 ft; arranging to deepen.
Flint River Oil Co.'s No. 1 DeMoss, 300 ft. S and E, NW cor., SE NW, Sec. 22-22-12	Bailed dry 3,046 ft; W.O.
Dr. W. N. Hankin's No. 1 Newell, 300 ft. S and W, NE cor., Sec. 12-19-11	Reaming to bottom 1,185 ft.
D. L. Perkins' No. 1 Ardis & Co., 1,127 ft. N, 198 ft. E, SW cor., Sec. 13-15-11	Tested S.W. 1,004 ft.
Rombaugh et al's No. 1 Allison, SW SE, Sec. 10-19-13	S.D. 1,600 ft.

CADDO PARISH

United Gas Public Service Co.'s No. 1 M. K. Smith, 660 ft. S, 2,640 ft. W, NE cor., Sec. 33-23-16	D.S.T. 5,680 ft.; est. 6,000,000 ft. gas.
W. P. Wallace, tr.'s No. 2 Cunningham-O'Conner, 210 ft. S, 940 ft. E, NW cor., Sec. 15-17-14	Arrng. to set 6-in. csg. at 2,056 ft.

CALDWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4	Began Aug. 12; set 12-in. csg. at 110 ft.
Hudson et al's No. 1 Burton, Sec. 35-12-2e	S.D. 2,950 ft.

CATAHOULA PARISH

National Drlg. Co.'s No. 1 Marsh McMiller, 70 ft. N, 100 ft. W, C, Sec. 26-9-6	T.A. 3,097 ft.

CLAIBORNE—SUGAR CREEK

United Gas Public Service Co.'s No. 1 Treadwell & Hawk, 1,470 ft. S, 1,395 ft. E, NW cor., Sec. 6-19-5w	Rigging up.

DE SOTO PARISH

Keatchie O. & G. Co.'s No. 1 Hallie Smith (was H. E. Weichert's), NE SE, Sec. 31-14-15	S.D. 2,350 ft.
S. S. Meek, tr's No. 1 Wagner, 300 ft. S and E, NW cor. SE NW, Sec. 5-12-14	Drlg. 2,845 ft.
Ben Merritt, tr.'s No. 1 Wallums, NE cor. SW SW, Sec. 19-12-12	Set 6-in. csg. 2,580 ft; T.D. 2,657 ft.

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LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA

CADDO PARISH—PINE ISLAND

Company, farm and location—	Remarks:
J. T. McCormick's No. 1 C. B. Christian, 830 ft. S, 300 ft. W, NE cor. SW, Sec. 27-21-15	S.D. 1,335 ft.
Shreveport Oil Corp.'s No. 2-B Muslow, 1,000 ft. S, 300 ft. E, NW cor., Sec. 32-21-15	S.D. 2,135 ft.
Simplex Oil Co.'s No. 1 Youree-Glassell, 500 ft. N and E, C, Sec. 13-20-15	Set 10-in. 150 ft; S.D.

CADDO PARISH—GREENWOOD AREA

Pyramid O. & G. Co.'s No. 2 Breard, 723 ft. S, 660 ft. E, NW cor., Sec. 10-18-16	Drlg. 1,900 ft.

MOREHOUSE PARISH

Bahan & Bahan's No. 4 Feazel, 900 ft. W, 300 ft. S, NE cor., Sec. 2-20-4	Location.

OUACHITA PARISH

Carbon Consolidated's No. 6 Guthrie, Sec. 49-20-4e, 6,985 ft. N, 6,013 ft. W from Common Corners, Secs. 49, 26 and 25	Set 8-in. at 736 ft.; drlg. 930 ft.
Carbona Consolidated's No. 7 Guthrie, Sec. 50-20n-4e, 5,263 ft. N, and 7,475 ft. W of Corners of Secs. 25, 26 and 49 in Sec. 50	Location.

RICHLAND PARISH

Southern Carbon Co.'s No. 1 J. A. Noe, Sec. 24-17-5, 3,291 ft. S, 660 ft. E, NW cor.	Derrick.
Southern Carbon Co.'s No. 6 Rosengraut & Ducomb, 2,640 ft. E, 1,980 ft. N, SW cor., Sec. 19-17-6	Rigging up.
Southern Carbon Co.'s No. 9 Rosengraut & Ducomb, 1,320 ft. N, 660 ft. E, SW cor., Sec. 18-17-6e	Began Aug. 13; set 12-in. csg. 184 ft.; drlg 240 ft.
United Carbon Co.'s No. 1 Faust Lbr. Co., 1,320 ft. S, 1,980 ft. E, NW cor. SW, Sec. 13-17-5	Set 6-in. at 2,285 ft.
United Gas Public Service Co.'s No. 1-A Wayne Land & Timber Co., 1,320 ft. S, 697 ft. E, NW cor., Sec. 24-17-5e	Comp. for 35,928,000 ft. gas 2,428 ft.

SABINE PARISH—ZWOLLE

Roy Baker's No. 1 Sabine Lbr. Co., Sec. 1-7-12	W.O., S.R. 2,548 ft.
W. M. Coates' No. 1 Bowman-Hicks, 330 ft. S and W of C, Sec. 2-7-12	Drlg. 1,700 ft.
Dengall O. & G. Co.'s No. 1 Nulton, SE cor. NW NE, Sec. 1-7-12	Drlg. 2,000 ft.

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Saxet Field Reports Two Completions

Houston Oil Co. Owns Both, Which Are Big Gassers, Along With Oil Production. Camp Well May Extend Darst Creek Field

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Aug. 24.—Two tests were completed in the Saxet Field in Nueces County the last week and two new and important locations were made in the same field. These with a good showing of oil in Camp's No. 1 Sue Denman, a mile southwest of the Darst Creek Field in Guadalupe County, which makes it look like a possible extension to the field, and completion of a good well in the new serpentine plug in southwestern Bastrop County by Schimmel & Batts, were the leading features of the week's work in Southwest Texas.

Both of the completions in the Saxet Field were tests of the Houston Oil Co. The No. 1 Lawrence, carried by some as the No. 2 Harrell, and originally drilled as Thompson's No. 2 Harrell, was the discovery shallow gas well of that district at 1,569 feet. The No. 1 Harrell blew out at that depth, ran wild and was lost. The Houston Oil Co. bought the property, deepened Thompson's No. 2 to 2,740 feet, where it blew out and ran wild for several days as a gasser, and since has deepened it to 4,087 feet where it is a bigger gasser with 1,750 pounds pressure and making 50 bbls. of oil. Its No. 2 Rand Morgan, two locations east of it, first completed at 4,095 feet, has been deepened since to 6,375 feet and plugged back to 4,092 feet, where it was completed again last week as a big gas well of 1,400 pounds pressure and about 65 bbls. of oil.

This covers everything there is drilling in that field at this time except the two new locations on the north edge of the field and the Gulf Coast Oil Co.'s No. 1 Harrell, a mile north of the two Houston Oil Co. wells completed the last week. Gulf Coast Oil Co.'s No. 1 Harrell was a pretty good oil well at 4,095 feet, the initial production being reported as 150 bbls. It has been deepened to 5,225 feet, but is now plugging back to 4,554 feet to test a sand there.

New Locations

One of the new locations is the Gulf Coast Oil Co.'s No. 1 Elder, a few locations northwest of the No. 1 Harrell, and the other is the Neal-Milton and Kepley Production Co.'s No. 1 Roark, 200 feet from the east and south lines of the tract and about 2,000 feet northwest of the Saxet Oil Co.'s No. 8 Dunn in the older part of the Saxet Field on the east. These two locations are on a line east and west with the older part of the Saxet Field and O. C. Best's No. 1 Boory on the west. The distance from Best's No. 1 Boory to the eastern edge of the old Saxet Field measures the length of the field, which is 5 miles, and Zoch's No. 1 Baldwin, the farthest south producer, gives the field its width of 2½ miles, with several sands already proven. A map of this field, complete at the time, was published in The Oil and Gas Journal May 14, 1931, on Page 57.

This territory ties in with the White Point Field on the north side of Nueces Bay and the Refugio Field in Refugio County and McFadden gas field in southern Victoria County. There are several sands now proven in all these fields extending over an area of over 50 miles. Production is mainly gas thus far though the Refugio Field has produced an enormous amount of oil, and operators are expecting to see this stretch of territory a favorite ground for wildcatting when conditions in the industry get back to normal.

In northern San Patricio County, Jacob, Buzzini & Pickett's No. 2 Baldwin has attempted drill stem tests twice at a little below 2,000 feet and had a little gas, especially in the last test, but too much salt water to make a well. The last sand was from 2,066-97 feet and it is now drilling deeper. It is 2½ miles south of the Aransas Oil Corp.'s No. 1 Welder which came in a big gas well some weeks ago at 3,634 feet. Between them is the Welder Oil Corp.'s No. 1 Welder, 1,500 feet southwest of the Aransas Oil Corp.'s No. 1 Welder, which turned out a dry hole. Welder Oil Corp. has started the No. 2 Welder nearer to the discovery well.

Balcones Fault Zone

Chief interest in the Balcones fault zone is in John F. Camp's No. 1 Sue Denman in Guadalupe County on a 50-acre lease out of the Humble Oil & Refining Co. block southwest of the Darst Creek Field and in the line of the axis of the field. It is about 1 mile from the nearest production. It went from Taylor marl into the Edwards lime and on drill stem test showed two fourbles of oil and three fourbles of drilling fluid and oil and no water. Total depth is 2,507 feet and it has set casing. It will probably be tested this week. Acreage between the test and the nearest production is owned mainly by the Humble Oil & Refining Co. and Camp. The Humble block adjoins on the southwest a 116-acre lease of the Sun Oil Co. and the nearest producer is on the north edge of this Sun lease. Naturally the showing in the Camp well lends encouragement to those who have believed that the production ultimately would be extended across the Guadalupe River.

In southwestern Bastrop County, Schimmel & Batts' No. 3 Trigg made a good well, swabbing about 11 bbls. an hour from serpentine formation topped at 1,357 feet, with total depth of the hole 1,430 feet. This is their third producer and the seventh test they have drilled in that area. It is a separate serpentine field about 2½ miles southwest of the Yost Field. The producing wells of the new field are in the southeast corner of the James Stewart Survey and the northeast corner of the James Doyle Survey.

Schimmel & Batts are not planning any additional drilling for the immediate present. Smith & Barnes in the southeastern part of the county south of Smithville are shut down at 570 feet in their No. 1 Marberger and are not planning to resume for weeks. There are only two tests under way in the county, both wildcats, the Texas Development Co. test a mile north of Elgin in the northwestern part of the county ready to spud in, and W. A. Allen in the southwest part of the county close to the near serpentine field drilling at around 800 feet in the No. 1 Birmingham in the James Stewart Survey. Two new tests are to be announced soon in the western central part of the county.

Two tests in western Guadalupe County that have been standing idle have started drilling. Linne & Clark's No. 1 Linne, 4 miles south of Marion, is down 1,450 feet and McGarrity and others' No. 1 Wesch, 2 miles north of Marion, is down 1,200 feet. The latter topped the Edwards at 542 feet, according to the operators, and is now in the Glenrose and hence in the oldest formation of any test drilling along the Balcones.

The Sun Oil Co. has completed several core tests in the northwestern part of Wilson County and has completed its work on that lease block. The Witherspoon Oil Co. has completed another test, the third producer by that company in the United block in eastern Bexar County, the discovery well of which was the No. 1 Cooksey of the Penn Oil Co.

Pettus District

The United Production Co.'s No. 39 Ray in the Pettus Field seems to have missed the sand. It is in the eastern end of the field and at 3,911-36 feet tested a small amount of gas and again at 4,130 feet. Production of oil in the field is at approximately 3,975 feet. The No. 39 Ray in the T. Hanson Survey, 1,130 feet southeast along the southwest line of the survey and 2,396 feet northeast of the line and at right angles

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WILDCAT OPERATIONS IN SOUTHWEST TEXAS

ATASCOSA COUNTY

Company, farm and location— Remarks—

Tom Draper's No. 1 Trueblood, 250 ft. from N line, 1,440 ft. from W line of tract, John Neill Sur.....T. D. 650 ft.; shut down.
Glen Mathis' No. 2 Mrs C. Martin, 100 ft. SE of No. 1..T. D. 2,452 ft.; drlg.

BLANCO COUNTY

Hardy-Sitton's No. 1 McMillan .....T. D. 600 ft.; fishing.
Theo. Hicks' No. 1 Specht, 1,500 ft. from S line, 500 ft. from W line of farm in Thomas M. Fowler Sur. No. 27 in extreme south point of county.....T. D. 700 ft.; setting 12½-in. to shut out water.
Liles-Adams et al's No. 1 Stanford, 150 ft. to S line, 1,420 ft. to E line of James Stanford's No. 155.....T. D. 1,040 ft.; drlg.
McCleary et al's No. 1 Schenling, 900 ft. to SE line, 600 ft. to S line of J. A. Rouse No. 118 Sur., 4 miles SW from Blanco City.....T. D. 574 ft.; shut down.
C Rosenfield's No. 1 Hohenberger, 800 ft. to W line, 1,260 ft. to N line, Sur. No. 94.....T. D 712 ft.; shut down.

BASTROP COUNTY

W. A. Allen's No. 1 Birmingham, James Stewart Sur.....T. D. 827 ft.; drlg.
Schimmel & Batts' No. 3 Trigg.....T. D. 1,428 ft.; completed, swabbing 18 bbls. hourly.
Smith & Barnes' No. 1 Marberger, 50 ft. W. line, 1,360 ft. S line of tract in King & Millett Sur. .....T. D. 570 ft.; shut down.
Texas Dev. Co.'s No. 1 C. H. Ray, 800 ft. from W line and 400 ft. from S line of farm in Thos. Christian Sur .....Derrick.

BELL COUNTY

Mildon Oil Co.'s No. 1 J. K. Edds, Maxiano Moreno Sur...T. D. 906 ft.; testing.
Fields & Lange's No. 1 C. S. White, 150 ft. from S line, 300 ft. to E line of farm in Nancy Roberts Sur.....T. D. 297 ft ; drlg.
Hartman Drilling Co.'s No. 1 E. L. Deaver, 600 ft. to N and 300 ft. to E line of farm, in Nancy Roberts Sur...T. D. 482 ft.; drlg.
J. W. Riley's No. 1 W. S. Chaffin, in M. Griffin Sur.....Spudded in.
James Scroggins' No. 1 Warrick, Ingram Sur.....T. D. 1,425 ft.; reaming.
Vilas Oil Co.'s No. 1 B. F. Whittington, 9 miles E of Holland .....T. D. 1,295 ft.; shut down.

BROOKS COUNTY

Ike Howeth's No. 1 Singer, 400 ft. E of Humble's No. 1 Singer .....T. D. 2,500 ft.; abnd.

BEE COUNTY

Alexander et al's No. 1 McFall, 3 miles S Skidmore.....T D. 1,510 ft.; standing.
Mauldin et al's No. 1 Kimball, 300 ft. S Grayburg's No. 1-A Kimball, S. Winship Sur.....T. D. 3,544 ft.; swabbing after sidetracking liner and swab.

BEXAR COUNTY

J. E. Anderson's No. 1 Suburban Irrigated Farms.....Making location.

(Continued on Page 83)

SOUTHWEST TEXAS PROVEN AREAS

COOKSEY POOL—BEXAR COUNTY

Company, farm and location— Remarks—

Witherspoon Oil Co.'s No. 1 Knapick, 412 ft. W of CEL in J. W. Riall Sur.....T. D. 1,380 ft.; set csg.

DOBROWOLSKI POOL—BEXAR COUNTY

W S. Rogers et al's No. 1 L. Donnop, Juan Montez Sur. .....T. D. 612 ft.; shut down.

BRUNER POOL—CALDWELL COUNTY

Joe Bruner's No. 1 Malone, A. Floyd Sur.....T. D. 2,572 ft ; set csg.; standing.

CHAPMAN POOL—WILLIAMSON COUNTY

Westbrook Oil Corp.'s No. 8-A Lawrence, 150 ft. from S and E lines of tract in S. Miller Sur.....Location.

PETTUS POOL—BEE COUNTY

J. L. Mauldin's No. 1 fee, 1,300 ft. N of S line, 150 ft. E of Medio Creek, Kerr Sur .....T. D. 3,930 ft.; standing.
Geo. N. Moore et al's No. 2 Freeland, in John Pace Sur., 1,000 ft. from S line, 600 ft. from E line of survey...T. D. 4,294 ft.; standing
United Prod. Co.'s No. 39 Ray, 1,130 ft. to SE line, 2,396 ft. to SW line of T. Hanson Sur.....T. D. 3,942 ft.; drlg.
T. B. Slick, estate's No. 1 Ray, in Kerr Sur., 330 ft. E of most easterly W line, 150 ft. N of S line of survey .....Location.

CARTWRIGHT POOL—LIVE OAK COUNTY

Houston Oil Co.'s No 14 Cartwright, 1,000 ft. W of No. 23 Cartwright .....T. D. 5,400 ft.; drlg.

CHITTIM POOL—MAVERICK COUNTY

Texas Gas Utilities' No. 8 Chittim, 24 ft. S of No. 7 Chittim .....T. D. 4,690 ft.; fishing.

SAXET FIELD—NUECES COUNTY

Gulf Coast Oil Co.'s No. 1 Maggie Harrall, 330 ft. from S and W lines of Blk. 32, Sec. 311.....T. D. 5,226 ft.; drlg.
Gulf Coast Oil Co.'s No. 1 Elder, NW of same company's No. 1 Harrell.....Rigging up.
Neal-Milton and Kepley Pet. Co.'s No. 1 J. N. Roark, 200 ft. to S line, 200 ft. to E line of 106-acre tract...Rigging up.
Houston Oil Co.'s No. 1 Lawrence.....T. D. 4,081 ft.; complete; gauged 1,600 lbs. gas spraying oil.
Houston Oil Co.'s No. 2 Rand Morgan.....T. D. 4,092 ft.; complete; 65 bbls. oil, 1,400 lbs. gas.

LAREDO DISTRICT
KOHLER POOL—DUVAL COUNTY

Humble Oil & Refining Co.'s No. 50 Kohler, 2,805 ft. from S line, 165 ft. from W line of Sur. 164.....T. D. 7,189 ft.; drlg.

CAROLINA-TEXAS POOL—WEBB COUNTY

George S. Marshall's No. 1 Benavides, 660 ft. from S line, 150 ft. from E line of Sur. 683.....Location.

SCHOOLFIELD-O'BYRNE POOL—DUVAL COUNTY

Duval Oil Corp.'s No. 3 Bishop Land Co., 330 ft. from N line, 1,650 ft. from W line of Sur 135.....T. D. 1,850 ft.; drlg.

Improvement in the Gulf Coast Districts

Increased Production Must Be Obtained by New Drilling There. Five New Operations Under Way. Buyers Seeking Crude

By Nell Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Aug. 24.—Developments on the Gulf Coast the past week pointed to a return of activity as well as general improvement in conditions. The shutdown of East Texas with the possibility that that area might be brought under permanent control has stimulated interest in the coastal area creating a tendency toward increased drilling play. Additional impetus was given this by a 15-cent advance in all coastal oil.

The Gulf Coast has been in an unusual position for some time. Although the great flood of oil in East Texas, the bulk of which has found outlet in or through this area, has resulted in an oversupply of cheap crude on the coast, there has been a near acute shortage of coastal oil itself. In compliance with previous proration allowance orders of the State Railroad Commission limiting daily production of the Texas Gulf Coast to a maximum of 140,000 bbls. daily (Louisiana Gulf Coast not included), operators in this area voluntarily have reduced their output to 130,000 bbls., which it has been for many weeks. This with the 20,000 to 23,000 bbls. produced on the Louisiana Coast gives a total coastal production of only around 150,000 bbls. daily. This in reality is much below the actual requirements for this class of oil.

As the reduction on the coast was effected through curtailment of drilling rather than proration of production, coastal crude thus is not readily available when needed. Except in a few controlled fields where production has been restricted from the beginning by flowing efficiency operation to well below their potential ratings increased production cannot be obtained merely by opening up wells but must come from new drilling and development.

Seeking Crude Supply

Consequently a number of buyers have been getting around quietly over the coastal fields trying to make connections for a long time source of crude. Substantial inquiries for contracts have been increasing within the past several weeks and for the most part fair sized premiums are being offered. Except for the depressing effect of East Texas, coastal oils probably would have justified much higher postings some time ago. Several important transactions now are pending, which, if consummated, will contract the owners of leases and pools in each case to the life of their respective properties with a perpetual premium over posted prices. In two instances companies with large requirements are trying to buy outright fields owned or controlled by smaller operators. These trades late in the week had not been entirely consummated although it was reasonably certain they would go through. In another case a buyer is reported to have offered to take from a certain producer 1,000,000 bbls. a year over a long period at a flat price of $1.05. The present coastal postings range from 55 cents for crude below 25 gravity to 66 cents for 35 gravity and above.

New Operations

A very noticeable increase has been noted in the last two weeks in the number of new operations starting on the Gulf Coast. However, a large part of this is at Barbers Hill where, on the east flank, a new line fight drilling play is being forced following the recent opening by The Texas Company's No. 6 Wilburn of a new prolific sand above the "Big" lime and considerably shallower than the original deep sand. Ownerships in that area are cut up into numerous narrow strip tracts, necessitating close drilling. The new play is following a line of development up on the dome and just inside the circle of production of wells in the 5,000-5,400-foot sand below the lime.

Five new operations already have got under way in this play. Immediately following the bringing in by The Texas Company of its No. 6 Wilburn, Humphreys Corp. started No. 8-H Kirby, 70 feet north of The Texas Company's line. This, late in the week, was down several hundred feet. Since. The Texas Company has made location for No. 7 Wilburn, which is a south offset to Humphreys' No. 8-H Kirby, No. 6 Wilburn being out of the south line of the lease. McAlbert Oil Co. is offsetting The Texas Company's No. 6 Wilburn to the south, while Gulf Production Co. has started drilling in its No. 4 Wilburn on the tract south of McAlbert's narrow strip, and offsetting Gulf to the south, Mills Bennett Production Co. has started its No. 5 Wilburn.

Barbers Hill

With the start of this new development on the east flank, Barbers Hill is just completing a competitive drilling play on the west flank, which has been under way there since late in 1930 and reaching its peak in March of this year. Since then drilling has fallen off from a top of between 25 and 30 operating rigs to as few as a half dozen scattered over the west, northeast and the south flanks and production has dropped from a peak of nearly 33,000 bbls. to around 20,000 bbls. Barbers Hill, since the discovery of deep production on the east flank in October, 1928, has witnessed a succession of drilling plays on various sectors of the dome with only brief periods of inactivity between each. On the west flank, Sun Oil Co. got a small well in its No. 3 Smith, which came in during the week flowing by heads approximately 160 bbls. of oil daily, the total fluid showing about 12 per cent water. A total of 188½ feet of 5-inch screen was set at 5,323 feet. The Texas Company's No. 2 Winfree, same area, was swabbing late in the week but showing 98 per cent water with only 2 per cent oil from sand at a total depth of 5,611 feet. Although the earlier development of this area resulted in a long series of good producers from that sand, the later completions as indicated by the above two wells have been small and of little importance commercially. Only four rigs now are running in that area at present and developments there probably will be suspended with the completion of the present drilling tests unless new discoveries are made.

East Hackberry

Chief among field developments during the week was the completion by J. G. Sutton of his No. 1 Erwin at East Hackberry, Cameron Parish, Louisiana, which came in flowing 1,200 bbls. of pipe line oil daily from sand at 2,980-89 feet. Production is through a three-eighths-inch choke, with pressure of between 800 and 1,000 pounds. One joint of 4½-inch screen was set in the sand with 6⅝-inch casing at 2,972 feet. Gravity of the oil is 24.1 degrees at a temperature of 87°, corrected gravity being 22.5 degrees.

This well, location being 1,850 feet west and 200 feet north of the SE cor. of the NE SE of Section 13-12s-10w, extends production at the East Hackberry Dome a substantial distance northward. The location is about 1,500 to 2,000 feet to the northeast of the shallow pool in sand at 2,600-2,800 feet overlying the top of the dome and some 2,500 feet north of the strip of deeper production lining the south flank of the dome.

Completion of this producer, the first test at Hackberry in several months, calls for the immediate drilling of two additional tests, one by Yount Lee Oil Co. in Kelso Bayou, offsetting the well to the south, and a second by Calcasieu Oil Co. to the southwest. Permit already has been applied for by Yount Lee Oil Co.

The lease on which this well was drilled originally was held by the Gulf Refining Co., which drilled a test, west of the present well, to a total depth of 3,500 feet where it went into salt. The lease then was assigned to J. G. Sutton on a 50-50 working arrangement.

Lockwood Field

Cullen & West and the Gulf Production Co. completed their fourth consecutive producer in their Lockwood (Thompson) Field, Fort Bend County, with the bringing in of their No. 1-B Lockwood & Sharp, flowing at the rate of 31 bbls. hourly through a half-inch choke from sand at a total depth of 3,543 feet. A total of 28 feet of 4¾-inch screen was set with 2½-inch tubing to the top of the hole. This well is a direct west offset to No. 1 Lockwood.

These operators are going ahead with an active development of the field, which was opened just a few months ago. Two new locations have been made, these being No. 2 H. P. Lockwood, 600 feet east of No. 1, and No. 2 A. P. George, 600 feet east of No. 1 George. The new tests are offsets to each other. Another test, No. 2-A Lockwood & Sharp, 800 feet north 20° west of No. 1-A, the discovery well, late in the week was drilling around 2,900 feet. The discovery well found the pay at a total depth of 3,087 feet.

Liberty County

Only two other wells were completed during the week, these being Bashara Oil Co.'s No. 2 Bashara fee, Hull, Liberty County, which was deepened from a former producing horizon at 4,248 feet to one at 4,452 feet, where it flowed at the rate of 800 bbls. daily, and Cranfill-Reynolds Co.'s No. 1 Davis, Esperson, Liberty County, also an old well deepened. The latter pumped 400 bbls. daily from sand at 3,564-82 feet. It formerly was a well in sand at 2,336 feet. Three wildcats, which have been shut down for some time, were abandoned.

At Humble, The Texas Company's No. 25 House, was deepened from a sand at 4,614 feet, where it was a small pumper, to a total depth of 5,008 feet, where it was put on the pump but made only fresh water. It has not been completed. Gulf Production Co. tested salt water in its No. 14 Boyt, Hankamer, Liberty County, in sand at 3,961-78 feet, to which it was plugged after drilling to a total depth of 6,005 feet. A total of 41 feet of 7-inch screen was set. Pipe will be perforated higher up to make another test. This test apparently is making the first failure in the series of 14 tests which have been drilled on the Boyt tract, comprising the Hankamer Field. Although only 500 feet from production, it either failed to find any of the numerous sands which have been productive in other wells or else tested salt water in them.

Matagorda County

Some interest is being centered on Ike Laughlin and others' (Royal Oil Co.) No. 1 W. H. Gray, Markham, Matagorda County, which late in the week was preparing to test sand showing oil at 3,245-57 feet. The well is on the north flank of the dome and the sand apparently is the same as that found in E. M. Hamill's No. 1 Meyers, recently completed on the northeast flank of the dome at 3,242-63 feet. The latter well, which came in for 500 bbls. daily on a quarter-inch choke, has proved the best well yet completed at Markham. Opened on a three-eighths-inch choke last week, it flowed 1,273 bbls. of pipe line oil in 24 hours, and then was pinched to a three-sixteenths-inch choke making at the rate of 253 bbls. daily. The sand is entirely new as previous production has been from high horizons. The Hamill well not only opened the new sand but was in wildcat territory. The Laughlin well is in an old productive area in shallower sands.

New Locations

Among new locations was Harrison & Abercrombie's No. 15 Nash at Nash Dome on the Brazoria-Fort Bend County line. This is the first new test to be started at Nash in a year. It is in the Thomas Alsbury No. 2 League, 450 feet east and 75 feet south of No. 13 Nash, drilled by the former Rycade Oil Corp., the present operators having taken over Rycade's holdings at Nash. A rig is up.

Locations were made for two new wildcats in Harris County and one in Fort Bend County.

GULF COAST FIELDS AND WILDCATS

Week Ended August 22
All Rotary

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Production Co.'s No. 5 Wilburn, Henry Griffith League, 350 ft. W of No. 4 in C of lease	Spudded.
Gulf Production Co.'s No. 5 J. F. Wilburn, Henry Griffith League, 50 ft. from N line of tract and 210 ft. W of No. 1	Spudded.
Humphreys Corp.'s No. 6 E. H. Winfree, W. D. Smith Sur., 50 ft. from N line and 50 ft. from W line of tract	Drlg. shale and lime 5,542 ft.
Humphreys Corp.'s No. 1 Ebanspacker, Henry Griffith League, 700 ft. from the N line and 70.6 ft. from the E and W lines of the tract	Drlg. salt and shale 3,005 ft.
Humphreys Corp.'s No. 8-H Kirby, Henry Griffith League, 333 ft. W of No. 6-H Kirby and 70 ft. N of S line	Drlg. 300 ft.
McAlbert Oil Co.'s No. 4 Wilburn, Henry Griffith League, 200 ft. W of No. 3 in center of lease, north and south	Spudded.
McAlbert Oil Co.'s No. 2-A Higgins (W.O.), Wm. Bloodgood Sur.	Pulling screen to deepen 5,115 ft.
Sinclair Oil & Gas Co.'s No. 3 Smith, W. D. Smith Sur., 50 ft. out of S cor. of tract	Drlg. lime, shell and hard sand 5,123 ft.
Sun Oil Co.'s No. 2 Smith, W. D. Smith Sur., 75 ft. from W line, 50 ft. from N line of tract	Drlg. hard sand 5,417 ft.
Sun Oil Co.'s No. 3 Smith, W. D. Smith Sur., 50 ft. from S line, east offset Yount Lee Oil Co.'s No. 2 Winfree	Set 188½ ft. of 5-in. screen 5,323 ft.; comp. flowing 160 bbls. fluid, 12% water, ½-in. choke.

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New Operations in Dry Creek Dome

Seven Completions in Cut Bank Field, Montana. New Mexico Governor Asks Higher Price. Water Shortage at Greasewood

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Aug. 24.—Governor Seligman, of New Mexico, has requested producers in Lea and Eddy Counties to advance crude prices, though he declined to join Governor Murray in a shutdown program. No change was made in the Hobbs Pool proration program for the last half of August, which provides for 37,047 bbls. daily. Two operations in Lea County and three in Eddy County show only routine progress. A show of oil is reported in the Starr Oil Co., Ltd., test in San Miguel County. A small gas well was completed in San Juan County and one new operation was started.

Water shortage for the rotaries is becoming a problem in the Greasewood area in Colorado. Two wells are due for completion by September 1. Difficulties in cementing pipe at depth in that area are believed to have been solved. The Continental Oil Co. has been granted a permit to build a pipe line to Denver. A new area in southwestern Weld County is attracting attention and the Continental Oil Co. has taken over a large block.

Wyoming state officials are endeavoring to persuade Washington officials to set a minimum crude oil price for production on government land. The Resolute Oil Co.'s Badger Basin wildcat flowed at the rate of 250 bbls. daily when pressured. The Ohio Oil Co.'s Neiber Dome test is in the top of the Frontier at 7,167 feet. Several important Wyoming wells are near the completion stage. A 125-bbl. well was completed on the west side of the Osage Field.

Two new operations have been started on the Dry Creek Dome in Montana by the Ohio Oil Co. and its No. 1 Souders has increased its production to 15,000,000 feet. Seven wells have been completed in the Cut Bank Field by the Montana Power Co. interests up to this time. Their aggregate initial flow gauged 116,500,000 feet a day. Three new wells are being started by that company.

NEW MEXICO

While Governor Arthur Seligman declined an invitation from Governor William H. Murray, of Oklahoma, to join him in his attempt to force a better price for crude oil by shutting down the producing wells in the State, he did take action the past week in an effort to persuade the operators to increase prices. This consisted in addressing letters to all producers in Lea and Eddy Counties requesting them to advance the present prices of 20 and 25 cents per barrel. He did not say what course he would pursue if the operators declined, but indicated he would not let the matter drop if the first letter failed to produce results. Several months ago when an effort was made to close down the Hobbs Pool Governor Seligman was quoted as being opposed to such a move. He had taken the position that as long as Texas and Oklahoma were producing large quantities of oil New Mexico wells should be produced proportionately. The closing down of the Oklahoma and East Texas fields has, however, modified the situation, but he has given no indications as to whether this indicated any change in his policy.

C. G. Staley, umpire for the Hobbs Pool Executive Committee, advised operators on August 16 that due to the fact there is no change in pipe line connections or pipe line nominations in the Hobbs Pool, the proration schedule (No. 26) used for the period of July 16 to July 31, inclusive, will be in effect for the last half of August. The daily outlet at Hobbs will continue at 37,047 bbls. The majority of the producers in the Artesia Field are producing on alternate days at the rate of 500 bbls. daily, exclusive of 100 bbls. daily being run from the Compton lease.

Lea County

Only two operations are active in Lea County. The Western Drilling Co.'s No. 1 State, SE NE NE, Section 16-20-32, to the northwest of the Lea Pool, is drilling in lime at 3,785 feet. There was an increase in the water at 3,718 feet and it now stands 3,000 feet in the hole. The first sulphur water was encountered at 2,745 feet, rising 400 feet. There was an increase at 2,785-2,800 feet and at 3,130 feet the water stood 2,700 feet in the hole.

Culberson & Conrad's No. 1 State, C NE, Section 22-18-34, Caprock area, is bottomed at 3,355 feet in anhydrite and will run 8¼-inch to 2,200 feet and cement. It had some cavey ground above that depth.

Eddy County

Flynn, Welch & Yates' No. 60 State, SW cor., Section 5-19-28, Artesia area, a new operation, is drilling at 1,770 feet in anhydrite. R. D. Compton's No. 4 Brainard, SE SE, Section 5-18-27, in the vicinity of several small producers, is drilling at 610 feet. Oil Well Drilling Co.'s No. 1 Baker, SE NE NE, Section 21-21-26, is drilling at 1,020 feet in sandy lime.

San Miguel County

Starr Oil Co., Ltd.'s No. 3 Adams, NE cor., Section 25-17n-17, Dunken district, is bottomed at 4,775 feet waiting for 5⅞-inch which will be run to bottom. This test, which is attracting some attention, had a sand at 4,730 feet from which the water rose 300 feet in the hole. Below the water there was a good flow of gas with a show of oil. The gas would burn about 8 feet above the casinghead. The location is 1¾ miles west and half a mile north of the Texas Production Co.'s No. 1 Wilson, which was abandoned several years ago after having good shows.

DeBaca County

Matador Oil Co.'s No. 1 Woods, NE SW SW, Section 6-4n-20, Salada Creek, is bottomed at 3,200 feet in granite wash with 6⅝-inch cemented at 3,180 feet. The plug has been drilled out and it is now cleaning out below 3,180 feet.

San Juan County

An old well deepened from 500 feet by Cross & Poole, in their No. 1 Lawson, C SE SE, Section 9-30n-11w, Bloomfield district, is reported a completion at 787 feet as a gas well. It is rated at 325,000 feet a day.

Continental Oil Co.'s No. 24, SW NW SW, Section 1-29-19, Rattlesnake Dome, which was held up at 4,730 feet for eight months with fishing jobs, has cleaned out to bottom and drilled ahead to 4,745 feet at which depth 9⅝-inch was cemented with 1,000 sacks. It is being drilled with rotary with the objective a sand in the Pennsylvanian at around 6,700 feet which produced 600 to 800 bbls. daily in No. 17 in spite of inability to shut off water from a horizon just above the pay. This is the second well to be drilled to that horizon on this structure and a large well is expected. Considerable production in the Dakota was mudded off.

J. F. Cross and others' No. 4, C SE NE, Section 20-29-11, Bloomfield district, spudded on July 9 and is bottomed at 80 feet and fishing for tools. R. C. Oswell's No. 2, NW, Section 34-30-11, is drilling below 585 feet. Kutz Canon Oil & Gas Co.'s No. 1 Day, SW cor., Section 20-28-10, Kutz Canon district, is drilling at 3,427 feet.

Rio Arriba County

Governador Dome Oil Co.'s No. 1, SE. Section 15-29-7w, is drilling at 1,485 feet and carrying 6⅝-inch.

Guadalupe County

New Mexico Producing & Refining Co., Ltd.'s No. 1 McMillan, SW cor., Section 24-5n-16, Mesa Leon district, is bottomed at 1,819 feet in salt and red rock and fishing for 15½-inch bailer.

Luna County

Angelus Oil & Mining Co.'s No. 3 State, C NW SE, Section 20-21-10w, Deming district, is bottomed at 6,155 feet and has pulled 5⅜-inch to remove a bad joint.

COLORADO

Weld-Morgan Counties

Shortage of water for the big rotary outfits is causing some delay in the drilling of wells in the Greasewood area and this may become a very serious problem unless the situation is relieved by heavy rains. Water at present is being obtained from Jackson Lake, a big irrigation reservoir, but the supply is being drawn on very heavily by farmers for irrigation purposes and the lake already is at a low stage. When the Reiter-Foster Oil Co. started its No. 1 Ida Johnson, it constructed a 6-mile 4-inch line from the lake to the field. This line is not only the source of supply for the two wells being drilled by that company, but for the two wells being put down by the Continental Oil Co.

Unless unforeseen troubles arise one or more of the drilling wells will be completed around September 1. Reiter-Foster Oil Co.'s No. 1 Ida Johnson, C NE NW, Section 24-6n-61, 1,000 feet to the north of the discovery well, would have been in now but for delays in cementing pipe. This well is bottomed at 6,620 feet, at which depth 7-inch was cemented, and is drilling out plug. Progress is rather slow on account of the hardness of the cement and only 400 feet was drilled out in 48 hours.

Cementing has proved to be somewhat of a problem at Greasewood. It will be recalled that in attempting to cement 9⅝-inch at 6,226 feet with 2,000 sacks, circulation was lost and the pipe was filled almost to the top. None of the cement was put back of the 9-inch. When it was drilled out the hole was carried on down to the present depth where the 7-inch was landed and plans were completed for cementing it with 750 sacks to preserve the safety factor on both strings. It was determined that the temperature at the casing spot was 172 degress. The cement was mixed and in the casing in 25 minutes. In three additional minutes the plug was on its way with four high-pressure pumps running at full speed. At the end of 21 minutes, in the pumping down process, the pumps commenced to labor and were showing 600 to 700 pounds pressure and in 9 more minutes the pressure rapidly mounted to

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PRORATION IN TURNER VALLEY AREA NECESSARY TO SAVE THE FIELD

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Aug. 22.—Systematic pressure tests conducted for the Alberta provincial government in the Turner Valley Field by F. P. Fisher of Mount Vernon, Ohio, have been completed, and steps are now being taken to prorate the maximum gas flow of 100,000,000 feet a day among the various producing wells on the basis of the officially recorded flow and pressure. Of the 85 producing wells in the field, 6 were frozen or under repair; the remainder were successfully shut in for the purpose of the three-day test.

This was the first test of the kind ever undertaken in the Turner Valley Field, and for men who had worked there for years and never seen the gas flares darkened, the shutting off of entire sections of the field was a distinct novelty. For the first time in years automobiles had to turn on their headlights at night. Workers complained of inability to sleep owing to the absence of the familiar roar of escaping gas. Mr. Fisher stated that gas pressures in the field are declining at an average rate of 1 pound per day.

Minister Issues Statement

Following completion of the tests, R. G. Reid, provincial minister of mines, issued a statement emphasizing that the new restrictions imposed by the government were solely for the purpose of conserving the field. In part he said:

"If nothing were done to restrict the flow of gas, the Turney Valley, in from three to six years, would be dead both as regards gas and naphtha. But if we are successful in carrying out our conservation, there will be a supply of the field's products for 20 years. The government policy has been instrumental in checking a highly improvident situation.

"The gas wastage in the valley, on the basis of June production figures, was some 560,000,000 feet a day, or the equivalent of 2,000 tons of coal. In addition, the gas, as the flow continued, was showing a drier content. Less than 14 months ago the wastage was half what it is today.

"When the valley was in its preliminary stages of development, Royalite's No. 4 well only required 50,000 feet of gas to make 1 bbl. of naphtha. This year, based on monthly returns, the average for the field for making a barrel of naphtha was as follows: March, 116,000 feet; April, 124,000 feet; May, 139,000 feet; and June about the same.

"It has been shown that the rate of wastage in the field has been doubling every eight or ten months within the past three years. The inquiry carried out by Mr. Fisher has been on the basis of 100,000,000 feet a day, while the peak load on the pipe lines served in the territory near Calgary was 67,000,000 feet. With unrestricted flow, according to the present wells in the field, the evidence submitted at the recent gas rate hearing in Calgary showed the life of the field would be from three to six years. The present rate of wastage was between one-third and one-sixth of the remaining supply and was increasing each year.

"Rock pressure in the field has been observed in some wells since last July.

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Kettleman Hills Alone Is Out of Line

Other Fields in California Fairly Well Within Line of Allowable Production. Producers Sales Agency an Increasing Factor

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Aug. 22.—Crude oil production in California has shown an increasing tendency during the past few weeks and this situation is causing Umpire Anderson considerable anxiety. This increase in daily production is due primarily to the completion of a big well in the Kettleman Hills Field last week and adjustment of production by operators who earlier in the month were producing below their current allowable. Kettleman Hills, according to latest reports, is the principal offender as the production of this field early this week was 77,635 bbls. per day or more than 17,000 bbls. per day in excess of the pegged allowable of 60,000 bbls. which was set as the maximum daily production for the remaining months of 1931. Some of this excess is due to an underage during the early part of the month but this only accounts for a relatively small part of the surplus. With the exception of Kettleman Hills, most other fields are fairly well in line, some districts being below their allowables and others slightly in excess of their respective allotments.

Crude oil production for July was 2,242 bbls. below the daily output for June and the present outlook is for a slightly smaller production during August. The current month still has another week to run and it is probable a substantial reduction may be effected in production so that the daily average for the month may be somewhat below the average for July, which was 519,139 bbls. Major companies and independent refiners are hopeful of stabilizing conditions on the Pacific Coast during the next several months and considerable progress has been made from a marketing standpoint. Producers of crude oil, however, can undermine this stability if any crude oil is slipped out the back door below prevailing quotations or in violation of the mutually advantageous curtailment program. If producers and refiners will continue to effect stringent curtailment of production and pursue ethical marketing practices, producers of crude oil and marketers of refined products, both large and small, will be able to maintain the existing price structure for crude and refined oil.

Sales Agency Important Factor

The Oil Producers Sales Agency is rapidly becoming an important factor in the local situation and this organization is expected to assume a still more dominating position from a production standpoint. Rush M. Blodgett, general manager of the sales agency, announced a few days ago that the Milham Exploration Co., Pacific Western Oil Co., Superior Oil Co., Hermosa Oil Co. and the Loscal Petroleum Co. have been elected to membership in the agency and that several other applications for membership are pending. It appears probable the Continental Oil Co. and several other progressive California companies will become members soon. The Continental has been a contingent member since formation of the agency and it may therefore be possible that this company is already a member in good standing, although no definite announcement has been made. During June the agency marketed for its members 3,150,000 bbls. of crude oil and approximately 3,500,000 bbls. during July.

The declaration of martial law in Oklahoma and Texas is causing California operators to wonder if this condition will result in the initiation of intercoastal shipments of crude and refined oils to the Atlantic Seaboard for domestic consumption. So far no substantial inquiries have been received by California refiners due, possibly, to existing low prices for gasoline and other refined products along the Atlantic Seaboard. California gasoline in cargo lots is available at from 4 to 5 cents per gallon and at prevailing tanker rates could be laid down on the Atlantic Seaboard for somewhere in the neighborhood of 6 or 7 cents per gallon. These prices could be probably shaded on substantial commitments.

Shipments to East Coast

Shipments of gasoline to the Atlantic Seaboard for domestic consumption are substantially below liftings during 1930. During the current year to date, 8,977,164 bbls. of gasoline have been shipped from California to the Atlantic Seaboard, compared with 12,734,692 bbls. in the same period last year. Diesel and gas oil shipments to the Atlantic Seaboard for domestic consumption were 1,094,502 bbls. and 2,294,195 bbls., respectively. This represents a reduction in gasoline shipments of approximately 30 per cent from last year and a decrease of more than 50 per cent in shipments of Diesel and gas oil. Export shipments from California ports to Pacific and Atlantic ports is also well below last year, although exports of crude oil, due to increased shipments to Vancouver, are slightly higher than during 1930.

Failure of the referendum against the California reapportionment bill by a few thousand votes practically precludes the calling of any special election by Gov. James Rolph, Jr. If this referendum had been successful the governor was definitely committed to call a special election, at which time the Sharkey conservation bill was also to be submitted to the electorate for consideration. It is the consensus that if the oil industry in California can worry along until November, 1932, the governor is not justified in calling a special election to consider the Sharkey bill as this would involve an expenditure of approximately $500,000. The governor can call an election at any time during the interim if an emergency arises. It appears likely therefore the Sharkey conservation bill will remain inoperative until the next general election.

The recent disastrous gasoline price war on the Pacific Coast and depressed conditions of the industry has made it necessary for producers and refiners to effect drastic retrenchment programs. Refiners have been obliged to effect substantial reductions in both refining and marketing costs because of the highly competitive condition of wholesale and retail markets on the Pacific Coast. Producers of crude oil have also reduced operating costs and a further expansion of this work is anticipated. It is likely therefore that the Oil Producers Sales Agency will undertake some constructive work along this line. This subject has been under consideration for several weeks, and, while no definite action has been undertaken, it will probably receive serious consideration. The Oil Producers Sales Agency will probably formulate a definite program as soon as organization work has been concluded.

Unit Plan Discussed

It remains to be seen whether the agency will undertake this work as an organization or merely act as a sponsor. The sales agency as an organization could function satisfactorily and undoubtedly accomplish a drastic reduction in lifting costs, which, in some cases, practically preclude economic production under existing price schedules. Operators in the Seal Beach Field are considering the advisability of formulating a unit plan of operation somewhat similar to that in effect in the Kettleman Hills Field in an effort to reduce drilling and production expenses. The plan to be submitted for consideration does not contemplate inclusion of the Alamitos Heights town lot area but is limited to the main part of the field where productive acreage is held by the Standard, Continental and Associated. Nothing tangible has been submitted but a definite announcement should be forthcoming, possibly within the next two weeks.

Elwood

The Barnsdall and Rio Grande, co-discoverers of the prolific Elwood Field of Santa Barbara County, focused the attention of operators on this district a short time ago by revealing the possibility of developing commercial production in the brown shale overlying the present productive Vaqueros formation. No. 18 Bell Luton, the well which revealed the possibility of commercial production in the brown shale, was brought in under a natural flow doing 450 bbls. of 28.8 gravity oil and 2,100,000 feet of natural gas per day. This well was bottomed at 3,000 feet and finished with a 13⅜-inch water string landed at 1,478 feet and 2,000 feet of 6⅝-inch liner carrying 800 feet of perforated. This is the first indication that the brown shale in the Elwood Field is productive although gas and oil showings were logged in practically all wells during drilling. The oil showings have been discounted, however, as the brown shale characteristic of many California fields almost invariably contains enough oil to show in the ditch. No. 18 Bell Luton was still holding up satisfactorily at last reports and apparently justifies the drilling of several additional tests to determine the productivity of the brown shale at Elwood.

Ventura Avenue

The drastic reduction effected in drilling operations in the Ventura Avenue Field has had a tendency to divert attention from this district. There are only eight incompleted drilling projects under way in the Ventura Avenue Field, and, since operators are curtailing expenses by the elimination of unnecessary drilling, this field will be rather inactive during the next several months. A committee of engineers, headed by Ben E. Parsons of the General Petroleum, met in Los Angeles to consider plans for the elimination of gas wastage in the Ventura Avenue Field, and, while no final decision was reached, considerable progress was made. It has been tentatively decided to recommend a readjustment in the present status of several producing wells, some of which have a rather high gas-oil ratio. The committee was faced with responsibility of equitably allocating production of crude oil when considering the best method of eliminating the present gas waste approximating 50,000,000 feet daily. In addition to Chairman Parsons, the committee consists of R. R. Templeton of the Pacific Western Oil Co., W. C. Chonett and Anthony R. Meagor of the Shell Oil Co., J. R. Hicks and Hugh McDonald of the Superior-Bolsa Chica interests and Ralph B. Lloyd.

Huntington Beach

There was no definite change in the status of deep exploratory work in the town lot section of the Huntington Beach Field. The utmost secrecy which has surrounded work of the Superior Oil Co. in this area has prevented scouts and observers from arriving at any definite conclusion. Adjacent derricks were well populated for a period of 48 hours during the course of work on both deep tests of the Superior without any tangible result. From personal observation, the Superior's No. 7-2 Gillette looked wet, although this could not be definitely determined because swabbing operations were conducted during the night and the visibility somewhat obscured. The crew is still working on this well, which has been bottomed at 8,069 feet, and it is believed the fluid level is at approximately 3,000 feet. The well showed some gas and may consequently show up much better later when the heavy rotary mud is removed. Superior's No. 1 Fee, which was swabbed for four hours a few weeks ago and then shut in without a conclusive test, is still an enigma and its status will probably not be determined for some time. The secrecy surrounding present work of the Superior Oil Co. at Huntington Beach can be attributed to the company's desire to retard deep zone development and at the same time determine the possibility of developing deep zone production. So far, other operators interested in this area are sitting tight awaiting the outcome of work on the two tests of the Superior.

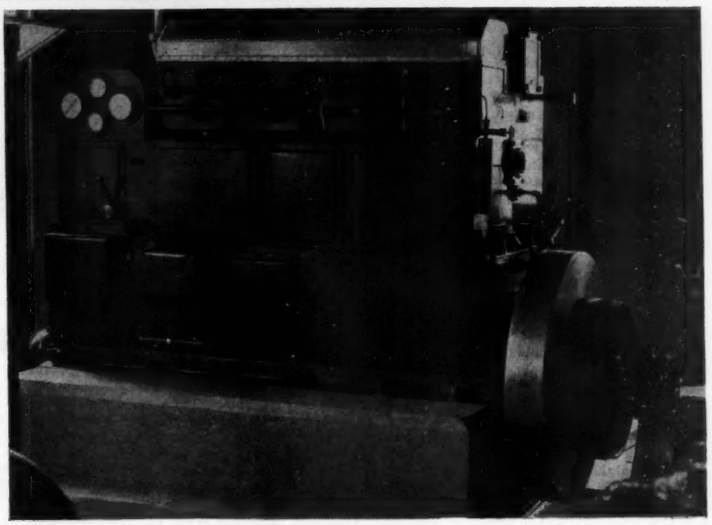
TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	.....	68,690
Fuel oil	.....	.....	.....	.....	.....	71,950
Diesel and gas oil	.....	.....	.....	.....	1,094,502	2,294,195
Gasoline	169,028	24,147	349,280	49,897	8,977,164	12,734,692
Kerosene	.....	.....	.....	.....	157,589	.....
Coastwise—						
Crude oil	375,820	53,689	633,471	90,496	14,130,217	9,629,480
Fuel oil	245,323	35,046	260,473	37,210	8,281,393	10,596,475
Diesel and gas oil	44,630	6,376	24,931	3,562	982,035	1,152,600
Gasoline	254,023	36,289	217,054	31,008	8,765,580	7,963,850
Kerosene	.....	.....	.....	.....	206,242	124,204
Naphtha distillate	.....	.....	.....	.....	4,952	.....
Exports—						
Crude oil	117,416	16,774	92,976	13,282	4,719,874	4,421,950
Fuel oil	212,432	30,347	167,906	23,987	8,999,162	11,530,213
Diesel and gas oil	51,425	7,346	94,299	13,471	2,453,631	2,990,083
Gasoline	369,929	52,847	179,002	25,572	6,913,208	10,155,630
Kerosene	14,840	2,120	.....	.....	1,059,050	2,570,166
Lubricants	.....	.....	.....	.....	36,353	10,082

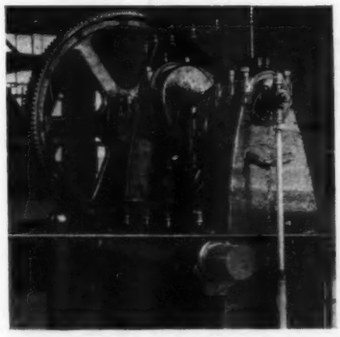
TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC AND GULF PORTS

Diesel and gas oil	.....	.....	.....	.....	.....	227,648
Gasoline	117,050	16,721	.....	.....	591,439	782,367
Lubricants	.....	.....	.....	.....	27,306	16,776
Coastwise—						
Fuel oil	53,558	7,651	26,060	3,723	2,599,899	2,288,380
Diesel and gas oil	.....	.....	.....	.....	278,159	185,376
Gasoline	56,245	8,035	108,627	15,518	2,407,114	2,707,936
Kerosene	4,623	660	4,634	662	212,543	152,702
Naphtha distillate	.....	.....	.....	.....	49,780	.....
Exports—						
Crude oil	.....	.....	.....	.....	107,736	3,075
Fuel oil	164,290	23,470	.....	.....	976,582	662,185
Diesel and gas oil	.....	.....	.....	.....	294,708	307,209
Gasoline	87,247	12,464	86,920	12,417	2,869,372	2,605,171
Kerosene	8,000	1,143	.....	.....	548,188	503,368
Lubricants	.....	.....	.....	.....	.....	15,672
Naphtha distillate	.....	.....	.....	.....	20,100	.....

DEPENDABLE DIESELS FOR OIL PIPE LINE PUMPING



Illinois Pipe Line Company's new oil-pumping station near Brookville, Ind., is powered by a pair of 130 B. H. P. Cooper-Bessemer diesel engines of modern design. Both engines are 4-cylinder, 4-cycle, solid-injection. Accessories are built in. The large-diameter crankshafts are *certified* by Lloyd's Register and A. B. S.



One of two triplex oil pumps, driven by engine shown above.

New booster station on 120 mile pipe line to Latonia, Kentucky.

COOPER-BESSEMER diesel engines handle rigorous, widely fluctuating oil-pump loads with full dependability.

The next time your company is considering diesel power for any application, check into Cooper-Bessemers. Analyze these six divisions of expense: (1) fuel oil; (2) lubricating oil; (3) shutdowns; (4) adjustments; (5) repairs; (6) actual depreciation.

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Competitive drilling will be retarded if the outcome of work on these tests can be kept under cover.

West Coyote Field

The Standard Oil Co. has just completed No. 49 Emery, a new well in the West Coyote Field of Los Angeles Basin, pumping 335 bbls. of 26.5 gravity oil per day. No. 106 Murphy Coyote, a recent completion in this area, showed a substantial increase in production and is now pumping 324 bbls. of 26.6 gravity oil from 4,210 feet. The Union should spud in two of the trio of new wells to be started in the Dominguez Field within a few days and No. 27 Callender should begin making hole shortly thereafter. The Continental Oil Co. encountered water trouble in No. 25 Selover, a new well in the Seal Beach Field, and the 9⅝-inch water string has been recemented at 6,140 feet. No. 24 Selover, the company's deep test in this field, which was carried down to 9,054 feet, has also been recemented as a survey indicated water was entering the hole at the shoe of the 6⅝-inch landed at 8,122 feet. There has been quite a little activity in the Los Cerritos section of the Long Beach Field where the Richlin Oil Co. recently completed a substantial producer in the deep zone. Several adjacent projects are being prepared for a resumption of work preparatory to being redrilled and deepened to the sand recently found productive by the Richlin.

Kettleman Hills

The Kettleman North Dome Association was unable to recover all of the fish in the Milham Exploration Co.'s discovery well and it has been decided to discontinue further work. Several hundred feet of drill pipe were recovered but the lower portion was so tightly wedged that the Doheny Stone Drill Co. recommended suspension of work as it appeared practically hopeless. The crew was accordingly transferred to the Continental's well, which also has approximately 2,000 feet of drill pipe in the bottom of the hole. This drill pipe dropped when the well blew in unexpectedly and thus duplicated the exact situation which occurred in the Milham's well. The Kettleman North Dome Association has authorized the Doheny Stone Drill Co. to kill the old Continental producer and recover the fish if it is possible to do so. When work is concluded on this well, the Standard Oil Co. will kill its two large gas wells located on adjoining acreage. This will result in a substantial reduction in the production of gas in the Kettleman Hills Field and will likewise be reflected in a substantial reduction in natural gasoline production.

The Kettleman North Dome Association has eight producing wells in this field, in addition to several incompleted drilling projects. During July the Kettleman North Dome Association produced 800,732 bbls. of crude and 3,840,719,000 feet of gas. This statement, filed with the Superior Court in conformity with requirements of the State's gas waste injunction, also showed a recovery of 5,606,128 gallons of natural gasoline from a total of 3,800,400,000 feet of gas treated during the month. The association delivered 1,502,384,000 feet of gas to public utilities during July, of which 424,114,000 feet went to the Southern California Gas Co. and 1,098,270,000 feet to the Pacific Gas & Electric Co. A total of 1,879,132,000 feet was blown to the air. This represents an average daily gas waste of 60,617,161 feet.

Fishing Job

The North American Consolidated is still held up with a fishing job in No. 1 Blauvelt, a deep test out on the north flank of the field, and progress has been rather slow on this well, which was down 8,483 feet when the mechanical trouble developed. The Petroleum Securities, up to a late hour, had not yet definitely cored the top of the Temblor in No. 1 Burbank, a test being drilled in the Middle Dome of the Kettleman Hills anticline. The well log shows a substantial thickening in the brown shale with the result that the company may be obliged to drill considerably deeper than anticipated. The Standard, which is drilling an offset in Section 29-23-19, has decided to await the outcome of work on the Petroleum Securities test as its project has been standing cemented for several weeks at 5,450 feet.

Drilling operations in all San Joaquin Valley fields with the exception of Kettleman Hills have been reduced to an absolute minimum and will probably continue to reflect decreased expenditures for drilling operations by all operators. The Belridge Oil Co. has selected its No. 64-27 in the North Belridge Field of Kern County for a deep test and this well will be cored ahead practically solid to determine existing subsurface conditions. The General Petroleum's No. 1 Berry, a deep test in the South Belridge Field, is still in the brown shale at 5,750 feet and this project is beginning to take on a somewhat dubious appearance, although its status at this depth is not by any means conclusive. The Chanslor-Canfield Midway Oil Co. successfully completed its No. 17 in Section 23-28-27 and this new well, out on the west front of the Kern River Field, is pumping 275 bbls. of 13.9 gravity oil per day from 2,156 feet.

GASOLINE TAX INCREASES

A report of the legislative committee, which has been campaigning against state gasoline tax increases, will be made at the nineteenth annual convention of the United States Good Roads Association at Birmingham, Ala., October 12 to 15.

RUSSIAN FIVE-YEAR PLAN DOES NOT ALWAYS PAN OUT AS ANTICIPATED

It is reported that the Soviet government of U. S. S. R. decided sometime ago to adopt modern methods in raising chickens and use incubators for hatching eggs instead of the older and slower natural means.

An order was placed with an American manufacturer and a representative went to Russia to instruct the users in how to operate the machines and he was very careful to go into the matter quite thoroughly and explained the use of the special thermometers that registered the amount of heat required for hatching the eggs in a 21-day period.

This temperature is about 103° F. with changes of not over 3 degrees above or below that point during the period of incubation.

The equipment sold had a capacity to handle 100,000 eggs at one time. One of the Russians put in charge of this work decided that he would apply a sort of five-year plan to this operation, only his desire was to hasten up production and thereby increase the number of chickens hatched.

His reasoning was that if it required 21 days to hatch an egg at 103° F. temperature if the temperature were raised to 154° F. the eggs would hatch in 14 days. A simple problem in ratio and proportion, 14 : 21 :: 103 : x.

It was agreed that this newer method should be tried and 100,000 eggs were put in the incubators and the temperature raised to about 154° F. and results anticipated that were going to revolutionize the poultry business in Russia and perhaps the whole world.

At the end of 14 days nothing had happened in the way of producing new chicks, so it was decided that they would let matters rock along for the required 21 days. At the end of that time there were still no baby chicks and they were beginning to become suspicious of their investment and ready to accuse the Americans of sharp practice.

At the end of 30 days, with still no results, it was decided to open some of the eggs, something that had evidently not occurred to the operators before, and they found that as a result of their trying to beat Mother Nature and hasten incubation they had on hand just 100,000 hard boiled eggs.

CRUDE OIL STOCK CHANGES

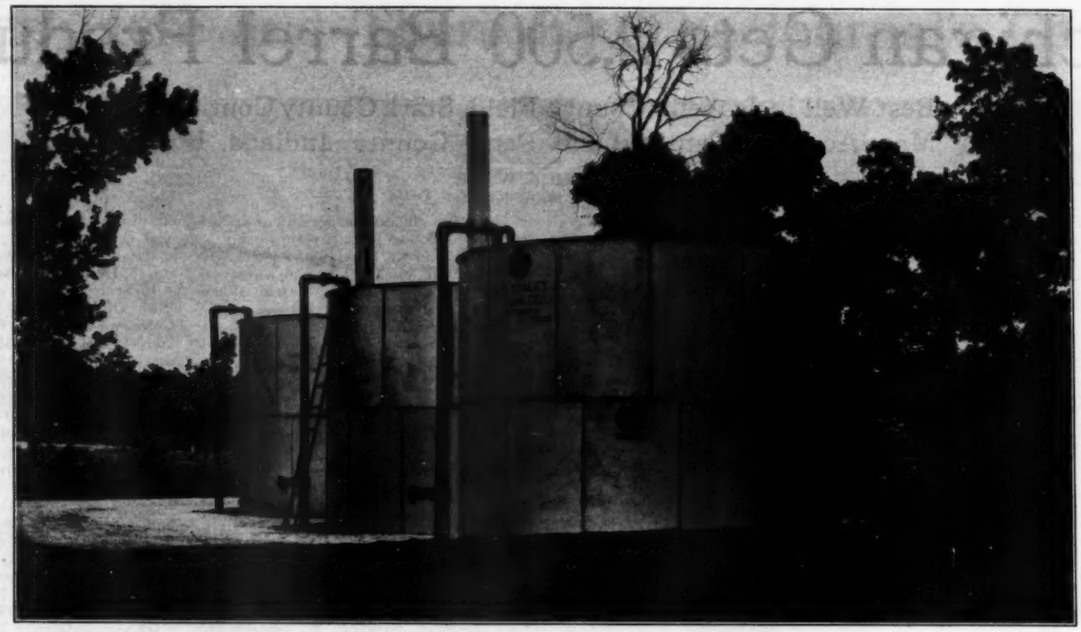
Pipe line and tank farm gross domestic crude oil stocks east of the Rocky Mountains decreased 8,000 bbls. in the month of July, according to returns compiled by the American Petroleum Institute from reports made to it by representative companies. The net change shown by the reporting companies for the increases and decreases in general crude oil stocks, including crude oil in transit, but not producers' stocks at the wells.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9- 2-15	6,510	suspended
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Mesmer City Corp., No. 1 Mesmer, Los Angeles Co.	24- 2-16	6,715	suspended
Westwood Oil Co., No. 2 Hermosa, Los Angeles Co.	6- 4-14	912	cemented
Cal. Oilfields Corp., No. 1 Hermosa, Los Angeles Co.	31- 3-14	2,560	suspended
Carniel Oil Corp., No. 1 Hermosa, Los Angeles Co.	31- 3-14	3,114	suspended
McMahon & McDonald, No. 1 Watts, Los Angeles Co.	12- 3-14	4,665	suspended
Thorpe Pet. Co., No. 1 Hawthorne, Los Angeles Co.	10- 3-14	3,840	suspended
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24- 3-15	2,700	suspended
Pacific Shore Oil Co., No. 1 Lawndale, Los Angeles Co.	20- 3-14	rig	suspended
Smith, J. O., No. 1 Lawndale, Los Angeles Co.	20- 3-14	mtl.	building rig
York & Smullin, No. 1 Watson, Los Angeles Co.	29- 4-13	3,790	suspended
Wilmington Consd., No. 1 Watson, Los Angeles Co.	17- 4-13	1,012	suspended
Pedro Pet. Corp., No. 1 San Pedro, Los Angeles Co.	14- 5-14	rig	rigging up
Brubaker, W. O., No. 1 Van Nuys, Los Angeles Co.	11- 2-15	2,700	suspended
Rucker & Croul, No. 2 Puente, Los Angeles Co.	27- 2-10	2,200	suspended
D. & B. Oil Co., No. 1 Puente, Los Angeles Co.	3- 2-10	4,620	suspended
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30- 2- 9	1,999	br. sh. drilling
Marcel Pet., No. 1 Puente, Los Angeles Co.	31- 2- 8	3,100	suspended
Cudahy Oil Co., No. 1 Bell, Los Angeles Co.	30- 2-12	1,370	suspended
Jones, W. L., No. 1 Bell, Los Angeles Co.	31- 2-12	rig	suspended
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6- 2-11	4,344	cleaning out
Weist Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	4,842	suspended
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,919	redrilling
Yellowstone Oil Co., No. 2 Alhambra, Los Angeles Co.	19- 1-12	2,015	suspended
Rucker, L. W., No. 1 Calabasas, Los Angeles Co.	26- 1-17	763	redrilling
Caballero Estates, No. 1 Calabasas, Los Angeles Co.	23- 1-16	1,150	hd. sd. drilling
Olympic Corp., No. 1 Calabasas, Los Angeles Co.	18- 1-17	5,960	suspended
Simi Oil Co., No. 1 Calabasas, Los Angeles Co.	18- 1-17	mtl.	building rig
West Coast Waste Oil, No. 1 Van Nuys, Los Angeles Co.	14- 1-16	rig	suspended
Standard, No. 1 Newport, Orange Co.	26- 6-10	5,561	cleaning out
Mesa Pet., No. 1 Newport, Orange Co.	21- 6-10	4,910	cleaning out
Beck, Alfred, No. 1 Corona, Riverside Co.	8- 4- 6	1,110	suspended
Alberta Oil Co., No. 1 Elsinore, Riverside Co.	35- 2- 2	3,425	cleaning out
Duncan, N. L., No. 1 Sagebrush, Riverside Co.	8- 4- 6	1,157	sd. sh. drilling
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,392	redrilling
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15	482	sd. sh. drilling
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	12-13- 4	3,519	suspended
Borderland Oil Co., No. 1 Point Loma, San Diego Co.	36-16- 3	5,120	recemented
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18- 2	1,243	sd. sh. drilling
Itasca Pet. Co., No. 1 Mesa, San Diego Co.	33-18- 1	1,570	sd. sh. drilling
Carr, O. K., No. 1 Capistrano, San Diego Co.	13- 8- 8	5,250	suspended

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Western Gulf, No. 1 Santa Maria, Santa Barbara Co.	5- 9-35	7,050	br. sh. drilling
Midwest Oil Co., No. 1 Los Alamos, Santa Barbara Co.	2- 7-35	3,450	fishing
Zaca Oil Co., No. 1 Los Olivas, Santa Barbara Co.	20- 7-31	rig	suspended
Ohio Oil Co., No. 1 Goleta, Santa Barbara Co.	16- 4-28	1,940	sd. sh. drilling
General Pet., No. 1 Goleta, Santa Barbara Co.	21- 4-28	4,533	gas—shut in
General Pet., No. 2 Goleta, Santa Barbara Co.	21- 4-28	4,350	gas—shut in
General Pet., No. 3 Goleta, Santa Barbara Co.	21- 4-28	6,450	Sespe form.
General Pet., No. 123 Goleta, Santa Barbara Co.	21- 4-28	2,030	suspended
General Pet., No. 124 Goleta, Santa Barbara Co.	21- 4-28	2,053	suspended
General Pet., No. 126 Goleta, Santa Barbara Co.	21- 4-28	2,047	suspended
General Pet., No. 137 Goleta, Santa Barbara Co.	21- 4-28	2,050	suspended
General Pet., No. 138 Goleta, Santa Barbara Co.	21- 4-28	4,931	suspended
General Pet., No. 139 Goleta, Santa Barbara Co.	21- 4-28	2,051	suspended
Bowles Oil Co., No. 140 Goleta, Santa Barbara Co.	21- 4-28	2,065	suspended
U. S. Pet., No. 141 Goleta, Santa Barbara Co.	20- 4-28	2,004	suspended
U. S. Pet., No. 142 Goleta, Santa Barbara Co.	20- 4-28	2,012	suspended
U. S. Pet., No. 143 Goleta, Santa Barbara Co.	20- 4-28	2,010	suspended
El Camino, No. 149 Goleta Tideland, Santa Barbara Co.	22- 4-28	2,010	suspended
Bolsa Chica, No. 191 Goleta, Santa Barbara Co.	24- 4-29	5,300	Sespe form.
Bellview Oil Co., No. 159 Goleta, Santa Barbara Co.	24- 4-29	2,090	suspended
Cochran, J. H., No. 1 Naples, Santa Barbara Co.	7- 4-29	5,134	cleaning out
Strickland & Tippet, No. 1-A Goleta, Santa Barbara Co.	19- 4-27	4,500	Sespe form.
Sovereign Oil Co., No. 1 Guadalupe, Santa Barbara Co.	20-10-35	5,500	suspended
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,080	suspended
C.C.M.O. Co., No. 2-A Rincon, Ventura Co.	28- 3-24	10,030	plug 8,072 ft.
Continental, No. 1 Rincon, Ventura Co.	28- 3-24	6,124	cemented
Bell, H. H., No. 1 South Mountain, Ventura Co.	22- 3-21	490	rd. sd. drilling
Pure Oil Co., No. 1 S. F. Canyon, Ventura Co.	15- 4-21	2,591	suspended
San Pedro Oil Co., No. 2 Sespe, Ventura Co.	13- 4-21	3,410	fishing
Magu Synd., No. 1 Oxnard, Ventura Co.	17- 1-21	4,910	suspended
Mex Cal Oil Co., No. 1 Conejo, Ventura Co.	12- 1-20	240	suspended
Graham & Loftus, No. 1 Goose Lake, Kern Co.	20-27-22	130	sd. drilling
Wilshire Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	7,000	suspended
Milham Expl. Co., No. 7 Buttonwillow, Kern Co.	6-28-22	2,738	cleaning out
Kent & McDonald, No. 1 Temblor Hills, Kern Co.	3-32-22	1,894	cleaning out
Calif. Oil Producers, No. 1 McKittrick, Kern Co.	30-30-22	4,960	br. sh. drilling
Purman, T. H., No. 1 McKittrick, Kern Co.	32-29-21	rig	rigging up
Federal Drlg. Co., No. 1 Buena Vista, Kern Co.	20-31-24	5,367	suspended
General Pet., No. 1 Belridge, Kern Co.	30-28-21	5,785	br. sh. drilling
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	wet
Rio Cal. Pet., No. 1 Shale, Kern Co.	2-27-18	2,355	suspended
Wicker, Sy., No. 1 Arvin, Kern Co.	12-30-28	3,580	suspended
Shell, No. 1 Weed Patch, Kern Co.	29-30-29	5,910	cleaning out
Osborn, Colter, No. 1 Weed Patch, Kern Co.	15-30-29	3,465	suspended
Osborn, Colter, No. 2 Weed Patch, Kern Co.	15-30-29	1,990	suspended
Mohawk Oil Co., No. 1 Weed Patch, Kern Co.	32-30-29	6,150	suspended
Standard, No. 1 Devils Den, Kern Co.	14-26-18	1,600	testing
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	21-26-18	1,530	br. sh. drilling
Temblor Dev. Co., No. 1 Blackwell Corner, Kern Co.	14-26-19	1,030	suspended
United Kern Pet., No. 1 Mojave, Kern Co.	26-10-14	1,065	suspended
Kendall Dev. Co., No. 1 Mojave, Kern Co.	27-11- 9	511	redrilling
Harding, J. B., No. 1 Mojave, Kern Co.	5-10-10	360	gr. sd. drilling
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	6,025	suspended
Associated, No. 1 Jacalitos, Fresno Co.	22-21-15	6,197	testing
Panorama Oil Co., No. 1 Carriso, San Luis Obispo Co.	7-31-21	4,019	suspended
Trav-El Oil Co., No. 1 Carrizo, San Luis Obispo Co.	7-32-22	2,370	hd. sd. drilling
Paso Robles Synd., No. 1 Paso Robles, San Luis Obispo Co.	34-27-11	4,040	rig burned
Latin Amer. Pet., No. 1 Shandon, San Luis Obispo Co.	21-27-15	4,615	suspended
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	24-28-12	1,250	suspended
Jergins, A. T., No. 1 Arroyo Grande, San Luis Obispo Co.	6-32-13	2,030	redrilling
Pacific Inland, well No. 1, Monterey Co.	19-23-15	1,345	fishing
Brown, W. F., well No. 1, Monterey Co.	13-23-14	800	repair rig
Irma Investment Co., No. 1 Dudley Ridge, Kings Co.	7-23-20	1,345	gas well—idle
O'Donnell, J. E., No. 1 Dudley Ridge, Kings Co.	7-23-20	1,635	gas well—idle
Eagle Oil Co., No. 1 Dudley Ridge, Kings Co.	15-23-20	rig	suspended
Kettleman Lakeview, No. 1-A Dudley Ridge, Kings Co.	30-23-20	2,040	recemented
Knudsen & Smith, No. 1 Reef Ridge, Kings Co.	36-23-17	4,300	hd. sd. drilling
Seymour, L. W., No. 1 Avenal, Kings Co.	10-22-16	1,148	suspended
Twin State Oil Co., No. 1 Point Arena, Mendocino Co.	14-12-17	7,170	hd. sd. drilling
Orinda Pet., well No. 1, Contra Costa Co.	32- 1- 3	2,850	cleaning out
Gholson, F. N., No. 1 Porterville, Tulare Co.	3-22-27	1,700	hd. sd. drilling
Ducor Pet. Co., No. 1 Ducor, Tulare Co.	14-24-27	3,180	redrilling
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Ellis & Stanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,498	suspended
Colusa Oil Co., No. 1 Bush, Colusa Co.	31-15- 4	940	hd. sd. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	3- 2-10	4,195	hd. sd. drilling
Orland Oil Synd., No. 1 Orland, Tehama Co.	31-23- 3	2,520	redrilling



Three 1,000-Bbl. Maloneys at Golding-Murchison Oil Co.'s Blackwell No. 2, Joinerville, Texas, Field.

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Is Fully as Important as Efficient Production Methods

Wasted oil is a direct drain on your income—no matter whether it is wasted below the ground or between the well and the pipe line. Unless you use lease tanks of modern efficiency—tanks which hold the oil under pressures adequate to prevent movement of vapors—the waste between wells and pipe line usually assumes serious proportions.

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Our *Vapor-Pressure* construction includes: 12-gauge or heavier rust-resistant Keystone Copper Steel; heavy 2″ angle ties and reinforcements; wide gussets on ties and ladders; combination valves set at 16 ounces pressure and 2 ounces vacuum; and our special aluminum paint which is exceptionally durable because made with a vehicle containing water-proof and alkali-proof Inhiburine.

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Packed in Steel-Bound Crates for Export

MALONEY

Michigan Gets 2,500 Barrel Producer

Best Well in Isabella County Field. Stark County Continues Most Active in Central Ohio. Perry County, Indiana, Busy

By George A. Whitney
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Aug. 24.—No. 1 on the George Woods 40 acres, S half S half NW, Section 22, Vernon Township, Isabella County, Michigan, owned by George Talbot and others, shattered all crude oil producing records in that field when its first 24 hours' gauge was checked at 2,500 bbls. Before the tools could be lifted from the deep hole the pressure of the surging oil and gas pushed them out faster than the mechanical reel could operate. Oil poured over the derrick but it was soon brought under control and tanked. It continued to flow steadily for at least 36 hours. Most wells flow in heads, gushing heavily for several minutes then subsiding. The Woods farm well is approximately 12 miles north of Mount Pleasant, toward the town of Clare.

Prior to the Woods strike the best the field north of Mount Pleasant had produced was 500-bbl. wells, and most of the wells in that area were drilled in within less than 250 bbls. daily.

George Talbot, who has produced several other wells in the Isabella-Midland Field and has other projects under way at present, is the owner of the big producer. When the 24-hour gauge of the Woods well was made known to Talbot, he remarked, "I guess it's right, but it's hard to believe." Even the most optimistic had not predicted the well would make more than 500 bbls. a day.

Flowing 2,500 bbls. the first 24 hours after being brought in, No. 1 Woods surpassed all other wells in flow in the Isabella-Midland or Saginaw pools. Only in the Muskegon Pool where some wells had a flush production of as much as 5,000 bbls. a day, have Michigan's oil fields rivaled the leadership of the Woods. For the first 18 hours the Woods averaged 104 bbls. an hour. The flow did not abate during that time but gushed steadily. Some oil was lost when the flow was cut into the tanks and the control head leaked several barrels an hour. Many oil men believed that had the well been flowing wide open and none of its production lost it would have gauged at least 3,000 bbls. the first day.

Most of the wells in the area of the Woods well had flush production of 250 bbls. a day. The Mathey wildcat, Michigan Gas & Oil Co. project in the Leaton Field, was brought in at 500 bbls. Gibson-Johnson-Borden's Mahon also was a 500-bbl. well. In the Chippewa-Greendale Pool east of Mount Pleasant the No. 1 Joslin discovery well made an initial daily flow of about 1,000 bbls., the Holmes made about 1,500 bbls., and the Struble was estimated between 1,000 and 1,800 bbls. These wells, prior to the Woods strike, were the recognized leaders in the Central Michigan fields.

Offsets to Be Started

Offset wells are certain to be started within the next few weeks, if not days. Most of the territory, if not all, in the vicinity of the Woods farm is under lease. Several different producers have been closely watching the outcome of the Woods well. Now that it has surprised even the most optimistic, producers are almost certain to go ahead with the drilling of their own leased lands.

Veteran oil men of the field were not reluctant to state that only the low price of crude is holding back the start of another oil boom in the fields of Central Michigan. With two good producers at the far ends of the proven territory, the Woods to the north and the No. 1 Struble to the east, dozens of drilling projects probably would begin should the price of oil spring back to the dollar a barrel level.

Not forgetting the thin structure that separates salt water from the pools of oil the status of the Woods well was regarded with a question. Especially in the northern field, where the structure is low in comparison to the other producing areas of the field, much trouble has been experienced in claiming oil because of its close proximity to the brine beds. The Woods well was completed at about 3,775 feet. Probably not more than 1 or 2 feet below the treacherous brine pool. The Crowley well, located in Vernon Township, was drilled in with a flow of some 350 bbls. of crude but only within a few hours started to make salt water. Other similar experiences with brine have occurred in the same field. Although the Woods well was drilled only a few feet in the "pay" it will not be drilled deeper, the owners indicated.

Less than two hours after the Woods well started to flow the Pure Oil Pipe Line Co. had constructed lines to railroad tank cars. The Ann Arbor tracks are only a short distance east of the well. Only one tank had been put up to take the well's production before it was drilled in. A second was put up very quickly.

The drill broke through the hard rock and dropped quickly into the softer oil sand. Drilling was quickly halted. When the line was about half way out of the hole oil began to show on the cable. As the tools came out a great column of oil shot more than 30 feet above the crown pulley. In a few moments the valve on the control head was turned sending the flow into the waiting tank. An estimated flow of 1,500,000 feet of gas accompanied the oil. Next afternoon the oil was allowed to shoot into the air while necessary adjustments were being made on the control head. Pressure and flow appeared to have slackened but little, if any. Frank Cunningham, tool pusher, and J. M. Miller, driller, were on duty when the well came in.

Laying Gathering Lines

Gathering lines are being put in by the Gas Corp. of Michigan to connect its transmission line to the natural gas wells in the northern section of Isabella County which will supply the city of Mount Pleasant. The cut over from artificial gas to natural gas will be started the latter part of the month. Temporarily the line between Mount Pleasant and Clare will be used to convey the product from the field. Tanks at the artificial gas plant probably will be put in service after the cut-over to carry a reserve supply of natural gas. A heavier transmission line is to be constructed later.

Derrick Hit by Lightning

Lightning struck and damaged the Pure Oil Co.'s No. 2-C Reem, in the Chippewa-Greendale Pool, during a rain and electric storm. Most of the damage was confined to the derrick house and some equipment which was destroyed by fire. The blaze was extinguished before it became a menace to adjacent wells.

Field Pickups

Talbert Oil Co. is drilling No. 1 Adams farm, Section 10, Greendale Township, not far from where the disastrous fire occurred on the Struble farm, same section, where 10 people were burned. Pure Oil Co. made a location for No. 1 on the George Purtell farm, Section 15, same township. Same company is drilling near the pay sand in No. 1 A. Bernard farm, Section 8, same township.

In Monroe County, southeastern Michigan, Alfred Violet is reported spudding in on the Munson farm, in Dundee Township, about 1½ miles northeast of the town of Dundee.

G. E. LeVeque, of Detroit, in drilling on the Seger farm, NW, Section 34, Van Burn Township, Wayne County, a mile southeast of Bellville and less than half a mile northeast of the good gas well on

(Continued on Page 117)

Eastern Operators More Optimistic

With Recovery of 40 Cents From Extreme Low Thought Worst Is Over. Slight Boom in Calhoun County, West Virginia

By Staff Correspondent

PITTSBURGH, Pa., Aug. 24.—Operators in the lower eastern fields are now viewing the Pennsylvania Grade crude oil industry with more optimism than has been displayed since the depression with its attendant price cuts. With the price increase of August 17, although but 5 cents, coupled with that of July 20 of 20 cents, and of August 3 of 15 cents, a total of 40 cents from the extreme low, it is thought that the worst is behind. With the fair refined market continuing, refinery demands for crude are exceptionally heavy and stocks are being drawn upon. In spite of this, eastern operators are watching closely the efforts of Oklahoma and Texas to enforce an era of reason in the place of overproduction. Flood prices in the west are very quickly reflected in eastern conditions as, at the present time, some of the large companies are now marketing a third grade of gasoline to meet the market which has been built up by independent stations selling bootleg gas. Other large companies refused to market a third grade but instead lowered their price on the regular grade, which again leveled all prices.

New operations in the eastern fields remain at a standstill. Additional Pennsylvania Grade crude may be needed in the future in which case full production may be allowed, but except in remote instances, such as shallow drilling or expiring lease drilling, new oil production will not be drilled for at the existing price levels nor for much less than $3 a barrel. Operators are marking time. In the gas fields a similar condition exists. Sufficient gas is available for more than the present demand in normal times, and is surplus during the present business lull as manufacturing plants and steel mills are operating at low levels. New lines are approaching eastern seaboard cities with the expectation of opening new markets but their effect will not be felt until another year.

SOUTHEAST OHIO

In southeast Ohio there were but two reports of completions, both in the shallow sands of Medina County. There fortune blew both hot and cold upon the operations of E. R. Edson & Son Co., which has had a remarkable series of fair wells in Chatham Township. On the George W. Packard lease No. 1 and on Lot 4, Section 13, this company completed its No. 17 at a depth of 413 feet, and after shot the well produced 75 bbls. the first 24 hours. On Lot 20, Section 16, the same company drilled its No. 23 on the M. A. and Eva Franks farm through the shallow formation to a depth of 460 feet and it proved dry.

WEST VIRGINIA

Little progress was made in the West Virginia Field and but three completions were recorded. Most of the drilling programs have ended or have been halted pending an improvement in conditions. Even in Boone and Kanawha Counties, there is a noticeable dearth of work, and in the slight boom in Calhoun County, very little new work is contemplated.

In Monongalia County there was a very fair gas well completed. In Battelle district, the West Penn Gas Corp. drilled on the Donley Six farm to 2,180 feet and in the Big Injun sand. It came in showing for over 1,500,000 feet a day.

In Calhoun County, Ed Hess and others completed a test on the John Evans farm in Lee district in the Injun sand at a depth of 2,187 feet. It will make a fair gas well, natural, from that formation. In Boone County, the Riverhead Gas Co. completed its No. 11 on the William R. Nelson heirs lease in Washington district. It will make a very light gas well from the sand at 2,346 feet.

Drilling in West Virginia

In Kanawha County, the Winifrede Co. is continuing work on its Wrightsville lease in Cabin Creek district and has reached the 2,100-foot level in its No. 15. In Elk district, its No. 18, a test on the J. A. Thomas farm, is down to 1,000 feet. In the same district, this company has reached 220 feet on the W. A. Bradford heirs lease. Several rigs are standing in this county, but all on proven leases. In Cabin Creek district, and on the Williams Coal Co. tract, the Pure Oil Co. is ready with rig and tools for its No. 254, and is hauling in materials for its No. 255. The Cannelton Coal Co. has three new locations for its Nos. 15, 16 and 17 on its own property in Cabin Creek district.

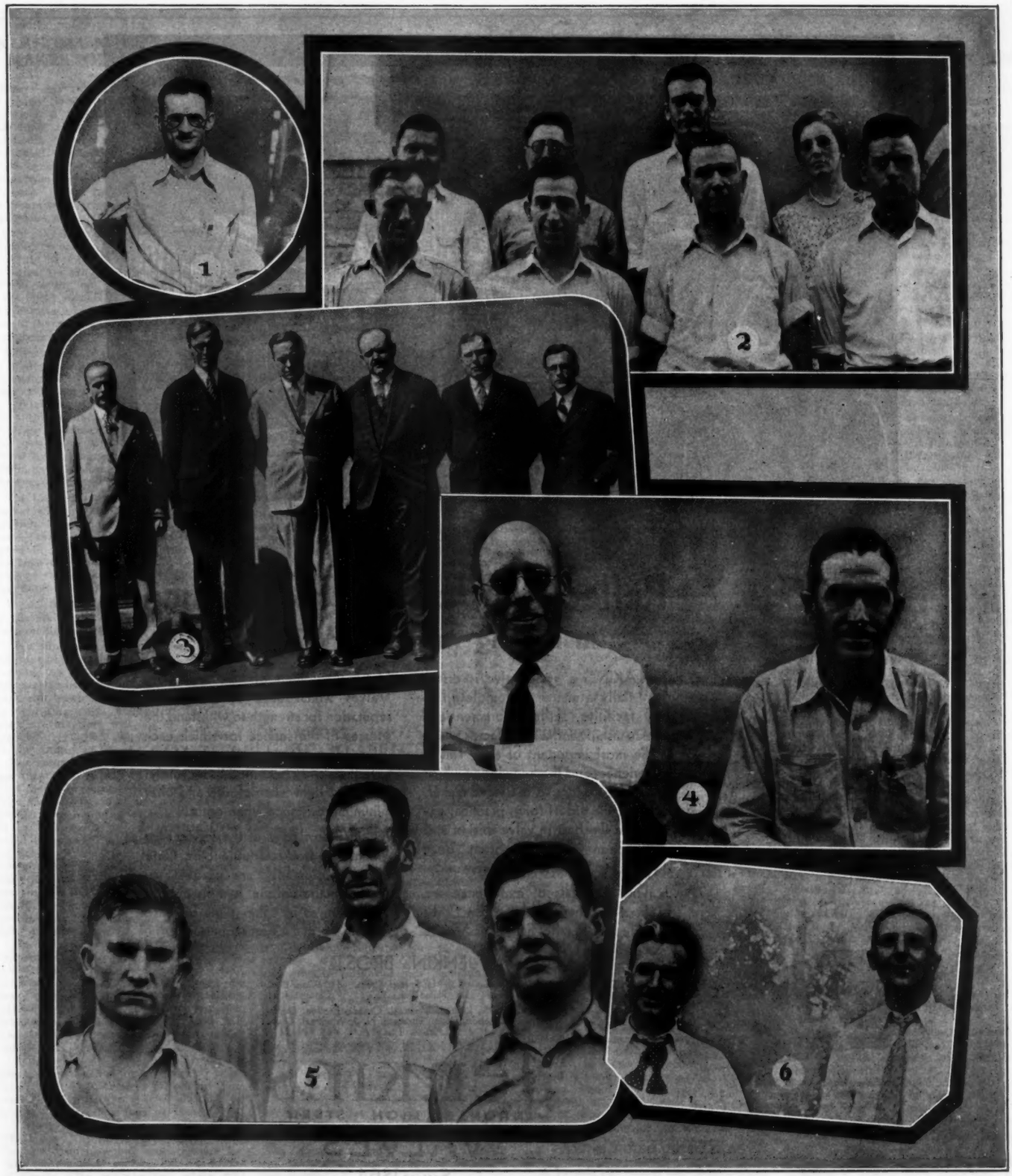
In Clay County, C. F. Wilson and others have shut down at 1,540 feet on the A. B. Hersman farm and are running 6⅝ casing. On the Hill-Long tract in Pleasants district, Godfrey L. Cabot has completed his road to his location for No. 9.

In Ritchie County, J. W. Deem and ohters have reached 1,860 feet in a test on the W. W. Lawrence farm in Grant district, which is probably the only test drilling in the county at present. In Murphy district, Godfrey L. Cabot has a location prepared on the J. N. Eddy farm, and C. B. Lewis and others a rig standing on the W. P. Baker farm, but operations have not started.

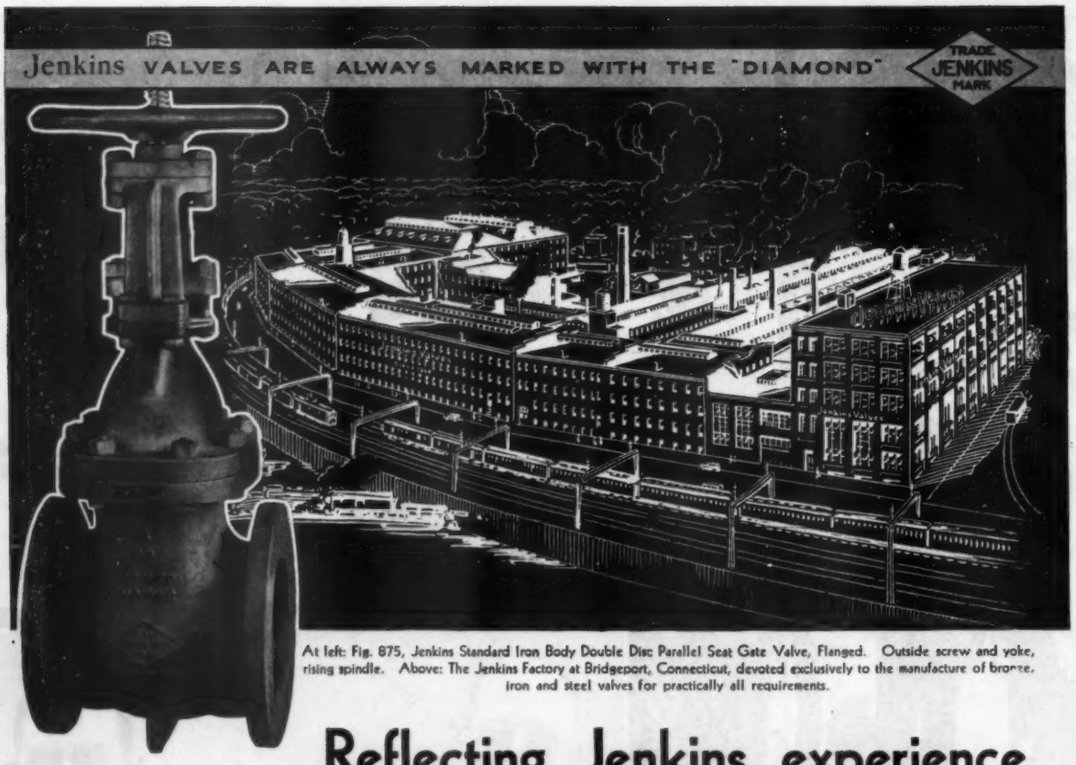
In Marshall County, the Manufacturers Light & Heat Co. is drilling its No. 1,975 on the L. Burley farm in Liberty district deeper and has reached 2,500 feet. In

(Continued on Page 73)

Seen Here and There By The Journal's Cameras



1—H. M. Stone, vice president and superintendent, Stone Oil Company refinery, Texas City, Tex. 2—Front row: R. L. Brazil, C. O. Foster, Jack Walker, and Austin Allen. Back row: Fred Grave, W. F. Beichner, J. E. Jarvis, and Mrs. Charlotte Smith; Phillips Petroleum Company, Oklahoma City, Okla. 3—R. C. Osterstrom, C. L. Smith, C. B. Watson, D. E. Sullivan, J. M. Augustus, and A. E. Harnsberger, of the Pure Oil Company. 4—L. B. Holland, district superintendent, and J. B. Stephens, production department; Phillips Petroleum Company, Oklahoma City, Okla. 5—L. E. Stephens, G. B. Hightower, and J. I. Fletcher, Stanolind Pipe Line Company, Kilgore warehouse, East Texas. 6—B. O. Hammond, district manager, and F. W. Gibson, general manager, Cypress Tank Company, Shreveport, La.



At left: Fig. 875, Jenkins Standard Iron Body Double Disc Parallel Seat Gate Valve, Flanged. Outside screw and yoke, rising spindle. Above: The Jenkins Factory at Bridgeport, Connecticut, devoted exclusively to the manufacture of bronze, iron and steel valves for practically all requirements.

Reflecting Jenkins experience
in making valves for 67 years

MAKING a good valve is essentially a matter of complete factory facilities, skilled workmen and workmanship, and a third factor which is the most important of all. This is experience, and the knowledge which experience brings to the valve maker. Without the aid of long, practical experience the best in valve design and construction can and often does dwindle to speculative guesswork.

Jenkins 67 years of experience are back of this new Jenkins Iron Body Double Disc Parallel Seat Gate Valve.

Sixty-seven years of making Jenkins Valves which have an established reputation for strength to withstand the stresses of the service for which each valve is recommended. Jenkins Valves have the ability to control flow closely. They seat tight when closed and offer minimum resistance when open.

Jenkins knowledge of the services for which Iron Body Double Disc Gate Valves customarily are used is reflected in the unique Jenkins closing mechanism as in other parts of these valves. Form 143 on request.

See the complete Jenkins BOOK OF VALVES Catalogue No. 22A on pages 819 to 866, 1931 edition of Sweet's Engineering Catalogues

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Natural Gas Industry Developments

OKLAHOMA NATURAL GAS MAKES NEW REDUCTION

Lower gas rates, effective October 1, for nearly 50 Oklahoma cities and towns are assured in the acceptance by the Oklahoma Corporation Commission of Oklahoma Natural Gas Corp.'s rate reduction offer which calls for a new rate of 45 cents per 1,000 feet, a cut of 5 cents from the old temporary charge of 50 cents. It was made on condition that the commission drop its investigation into valuations and rates of the company.

Paul Walker, chairman of the commission, recommended acceptance of the new rate by cities affected. Commission investigators, who have been working for several weeks on a study of company valuations, considered the charge fair. The new rate is expected to result in an annual saving of $1,500,000 to company's customers.

This last cut in rates, which brings to an end the long litigation started last December by the commission, makes a total reduction of 12 cents per 1,000 feet in Oklahoma City, Tulsa, and other cities throughout the State. A number of cities have received even greater cuts. The new rates will apply to all cities served by Oklahoma Natural, except five which have similar low rates at present because of special local conditions.

The Corporation Commission indicated that it will next make a thorough investigation into rates and charges of the Lone Star Co. of Texas and its subsidiaries in 26 cities of southwestern and southern Oklahoma. Rates in these sections of the State range around 75 cents per 1,000 feet.

E. A. Olsen, executive vice president of the Oklahoma Natural Gas Corp., in announcing the reduction said:

"We sincerely trust the necessity of substantial additional expenditures in carrying on independent investigation in this matter by the state and by the company can be eliminated and any economy in operating costs helpful to the company at this time will enable it to correspondingly offer the same gas service to the public at lower rates."

The compromise came at a time when gas franchises of the Oklahoma Natural were being investigated by the Corporation Commission and by municipalities which were planning to put the matter of gas service before the voters, Oklahoma City and Tulsa being among these cities.

Mr. Olsen stated after the agreement had been reached that probably three-fourths of the corporation's consumers would be benefited almost immediately, in that meter readings for September in some instances are made after October 1.

He pointed out that the company's transmission system includes more than 1,600 miles of pipe lines and said "rigid economy in operation is necessary to make this reduction possible." Mr. Olsen explained that his concern's principal purpose was "to improve our good will and insure permanency of our present satisfactory service."

A franchise to supply gas service in the town of Luther for the next 25 years was voted August 19 to Oklahoma Natural Gas Corp. in a special election, by a vote of more than four to one.

Luther is served at present by the Oklahoma Natural Gas system. While the new franchise does not stipulate the rate for domestic service, Luther is one of nearly fifty communities which will pay 45 cents per 1,000 feet, after October 1, as a result of the voluntary rate reduction announced last Saturday by the company. This represents a 25 per cent reduction in the rate for Luther.

Muskogee's gas price war appears likely to spread to another of the three firms supplying the city with fuel. Officials of the Oklahoma Natural Gas Corp., which has announced a 45-cent rate effective October 1, said they might meet the September 1 rate of 45 cents posted by the Municipal Gas Co., Cherokee Public Service subsidiary. The present rate here is 50 cents. The Muskogee Gas Co. has announced no change from its 50-cent domestic rate.

Western Service Corp. officials announced they will proceed with its campaign to win the Oklahoma City gas franchise whether the Oklahoma Natural Gas Corp. seeks postponement of the scheduled September 22 election or not. Western has submitted one 44-cent proposal to the city and has indicated it has another ready that may incorporate a 40-cent rate.

TENTATIVE FRANCHISE GRANTED BY REGINA

CHATHAM, Ontario, Aug. 24.—The Regina, Saskatchewan, city council has granted a tentative franchise to the Power Corporation of Canada, Ltd., to sell natural gas to be piped to the city from the Bowdoin Field in northern Montana. A draft franchise is being prepared for submission to a vote of the taxpayers.

An alternative proposition was submitted by Tri-Cities Utilities, Ltd., headed by C. O. Moore, to pipe gas to Regina from the Wainwright Field in east-central Alberta, a distance of 334 miles.

The Power Corp. project involves the construction of a 175-mile pipe line from the Bowdoin Field, as well as a complete distributing system for Regina. The cost is estimated at $8,000,000. Gas is to be supplied for domestic and industrial purposes at a maximum rate of 60 cents per 1,000 feet.

A previous franchise to the Tri-Cities Utilities, Ltd., to pipe gas from the Kinsella Field in eastern Alberta was rejected by the ratepayers of Regina some months ago.

OKLAHOMA SHUT DOWN NOT TO AFFECT GAS USE

Inquiries reaching the Oklahoma Utilities Association from outside the State indicate interest in natural gas markets dependent upon Oklahoma gas fields lest the closing down of oil production shut off the supply. Leading gas engineers state there will be no serious effect on the gas supply for the public, at least not unless it continues until winter as practically all gas sold to the public is from straight gas wells not affected by the shutdown. Residue gas from oil wells is cut off, but is not an important factor in the gas supply at this time. Sales of gas for drilling purposes will be lost to gas companies and sales to refineries may be curtailed, but a shortage of supply for the general public is not anticipated.

WICHITA FALLS ASKS GAS RATE REDUCTION

WICHITA FALLS, Tex., Aug. 24.—The ordinance providing for a reduction in domestic gas rates from 75 to 50 cents per thousand feet was passed on the second reading by the city council. This ordinance would place the new rates in effect October 1 and also does away with the present service charge of 50 cents per month.

The council also adopted a resolution asking the Texas Railroad Commission to assist cities in obtaining permanent lower utility rates. Mayor Walter Nelson, Jr., said that the petition was up before 600 member cities of the Texas League of Municipalities.

WEST TEXAS CITIES GET RATE REDUCTION

LUBBOCK, Tex., Aug. 24.—A reduction in natural gas rates, applying over a five-month winter period to both domestic and industrial users and to schools and colleges, was announced by R. F. Hinchey, vice president and general manager of the West Texas Gas Co., who said the reduction would affect all of the 42 West Texas cities and towns located on the company's lines.

According to the new rate schedule, a cut of approximately 15 per cent will be made to domestic and commercial users after the first 6,000 feet have been burned in each of November, December, January, February and March. Where users have been paying 67½ cents per 1,000 feet of gas up to 50,000 feet, they will pay 67½ cents per thousand for the first 6,000 feet, and 57½ cents for each additional thousand up to 50,000.

Schools and colleges will profit, the company official said, by dropping service charges from the secondary, or commercial, schedule to the industrial bracket, lowest offered by the concern.

West Texas cities and towns affected by the rate reduction include: Lubbock, Hereford, Littleford, Lamesa, Midland, Odessa, O'Donnell, Post, Plainview, Quitaque, Ralls, Silverton, Stanton, Sudan, Southland, Slaton, Turkey, Tulia, Tahoka, Wilson, Amherst, Anton, Abernathy, Brownfield Canyon, Crosbyton, Friona, Floydada, Happy, Hale Center, Idalou, Kress, Lockney, Lorenzo, Levelland, Seminoles, Seagraves, Muleshoe, Petersburg, Shallowater, Dimmitt and Bovina.

The mayor and city commission of Lubbock will not accept the reduction as sufficient, Mayor J. J. Clements said, but will go ahead with negotiations to further reduce the rate to give a greater benefit to the small consumer. Mayor Clements contends that the small consumers are the people the commission is most interested in and that this rate would not be a substantial reduction to that class of consumers.

CENTRAL CORPORATION OFFERS RATE REDUCTION

Gas rates in 11 cities of Oklahoma served by the Central States Light & Power Corp. of Chicago will be reduced if rate hearings pending before the State Corporation Commission are dismissed, officials of the company notified the commission.

E. H. Poe, an official of the Interstate Power Co., of which the Central corporation is a subsidiary, made the offer after he learned of the move of the Oklahoma Natural Gas Corp. for similar action.

Mr. Poe said if the cases were dismissed domestic rates at Clinton, Hobart, Cordell, Elk City and Erick would be cut from 54 to 45 cents per 1,000 feet, and that those at Sentinel, Dill City, Carter, Bessie, Lone Wolf and Rocky probably would be reduced to 50 cents from rates ranging from 50 to 60 cents.

Clinton and Hobart had filed complaints with the commission seeking reductions. Holdenville, also served by the company, now has a 45-cent rate.

Paul Walker, chairman, said the commission would not voluntarily dismiss the cases, but would await action on the part of the cities or the publication of reduced schedules by the company.

LAYING BOISE CITY LINES

A 74-mile gas supply line from Dumas, Tex., to Boise City, Okla., being constructed by the Panhandle Power & Light Co., has reached the city limits of Boise City and work of laying the distribution lines is being pushed rapidly by the Cimarron Utilities Co., which holds the Boise City franchise.

LONE STAR GAS NOT CONSIDERING RATE CUT

With the statement by R. A. Crawford, vice president and general manager of the Lone Star Gas Co., that the company is not considering a voluntary reduction in rates in the cities and towns it serves in Oklahoma, a bitter rate war between the company and Oklahoma officials was accepted as a certainty.

Previous to the statement of Crawford, Leon Hirsh, special attorney for Governor Murray and the Oklahoma Corporation Commission, announced a receivership suit would be filed against the Lone Star, charging evasion of taxes.

The Lone Star Co. and its affiliated interests serve 28 cities and towns in the State at an average rate of 75 cents a 1,000 feet as compared to the new rate of 45 cents at Oklahoma City and other points served by other gas companies.

The receivership suit will be filed in district court within a few days, Hirsh said. Also pending is a general hearing on the company's rates set for September 14 before the corporation commission.

This hearing may have to be continued, however, C. C. Childers, commission member, said, as state engineers will not have concluded their investigation of the company's properties by that time. This investigation has been speeded up since the settlement of the case against the Oklahoma Natural Gas Corp., he said.

The Community Natural Gas Co. of Durant and all other companies controlled by the corporation, which has its headquarters at Pittsburgh, Pa., will be named in the Lone Star suit, Hirsh said. This company recently contested its tentative assessment of property before the State Board of Equalization and Governor Murray left the meeting at that time with the threat, "All right, let them protest, we'll fix them."

Oklahoma cities served by the Lone Star subsidiaries are: Lexington, Loco, Manitou, Marietta, Madill, Mountain Park, Pauls Valley, Purcell, Ryan, Porter, Snyder, Sulphur, Waurika, Watonga, Achilles, Caddo, Davidson, Davis, Durant, Elmore City, Frederick, Hugo, Hastings, Hollis, Tipton, Walters, and Wayne.

DATA ON COEFFICIENTS

The gas measurement subcommittee of the American Gas Association will have a meeting in Pittsburgh, Pa., late in September to review the data on coefficients and the results of special tests which have been made on various factors affecting measurements by orifice meters. H. S. Bean, of the Bureau of Standards, has completed a trip to review existing data on measuring pulsating flows and the committee will also consider this information.

GAS WELL DELIVERIES

The subcommittee of the American Gas Association on gas well deliveries has been engaged in testing wells in the Texas Panhandle to check decline curves and to obtain other needed facts. This work has been under the direction of E. L. Rawlins of the Bureau of Mines. It is expected that the research involved in the present studies can be completed during this year.

MEMPHIS NATURAL DIVIDEND

Directors of Memphis Natural Gas Co., affiliate of Appalachian Gas Corp., have declared regular quarterly dividends of $1.75 per share on preferred stock, payable October 1 to shareholders of record September 20, 1931, and 15 cents per share on common stock, payable October 15, to shareholders of record September 30.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas, and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

WARNING COLOR FOR RADIATOR ALCOHOL

We have been informed that radiator alcohol, which we handle in large quantities, will have to be colored for next season. Have you any information concerning legal authority for this and what color will have to be used?—S. D. J.

The danger surrounding the handling of antifreeze mixtures, largely methanol, which has resulted in many cases of fatal poisoning has caused the United States Public Health Service to require all solutions containing over 15 per cent methanol, whether used for industrial purposes or in antifreeze preparations, to be labelled poison and to contain coloring matter with certain chemicals.

According to an agreement with the industries concerned this regulation became effective July 1. The mixture is to be prepared by the manufacturer and not by the retail distributor.

Under the agreement, any substance containing more than 15 per cent methanol for use as an "antifreeze" mixture for automobiles, is to contain 1/100 of a pound of methyl violet per 100 gallons, giving this solution a permanent purple color.

The mixture also must contain 4/10 of a pound of tartar emetic, 4/10 of a pound of chloracetophenone, or tear gas, and 1/10 of a gallon of triethanolamine per 100 gallons. The chloracetophenone imparts a very intense, burning taste to the solution. This, with the tartar emetic, tends to cause immediate vomiting. The tartar emetic and the triethanolamine are useful in keeping the chloracetophenone from decomposing. The tear gas effect of vapor from the chloracetophenone would be noticeable only in case of extreme exposure near the vent of a boiling radiator.

Water, required to make up 20 per cent of the total mixture, keeps the tartar emetic in solution.

It is possible that the exact proportions of the chemicals designated in the present agreement may be subject to changes in future agreements, depending upon the results of future experiences and experiments.

Part of the agreement regulating the use of methanol in industry and in antifreeze mixtures follows:

The word "methanol" shall be construed to mean and include the products commonly known as "methanol," "methyl alcohol," "wood alcohol," "wood naphtha," or any trade material which is essentially CH_3OH.

On and after July 1, 1931, no person shall sell, offer for sale, give away or transfer to another person any substance containing more than 15 per cent of free methanol for use as antifreeze or for ultimate use to prevent freezing in automobile radiators, unless the four following provisions are complied with:

A. It shall contain sufficient methyl violet to give an intense and permanent color to the solution, equivalent to that given by the addition of 0.01 pound of methyl violet 2B to 100 gallons.

B. It shall contain antimony-potassium tartrate 0.4 pound dissolved in each 100 gallons, chloracetophenone 0.4 pound dissolved in each 100 gallons, and triethanolamine 0.1 gallon mixed with each 100 gallons.

C. It shall contain at least 20 per cent water, by volume.

D. All containers shall have prominently displayed a warning sign reading as follows, in prominent heavy Gothic capital letters, red on a white background:

X
POISON
CONTAINS OVER 15% METHANOL
(METHYL ALCOHOL, WOOD ALCOHOL)
CANNOT BE MADE NONPOISONOUS
AVOID SPILLING

the words to be surmounted by skull and crossbones (X). The skull and crossbones and the letters of the word "poison" shall be at least 1-30th as high as the longest dimension of the container, but not necessarily more than 1 inch high, and the letters of the remainder of the warning sign at least 1-60th as high as the longest dimension of the container, but not necessarily more than one-half inch high.

FATTY OILS FROM FISH AS SPECIAL LUBRICANTS

Why are refined fish oils, especially porpoise oil, preferred to mineral lubricating oils for the lubrication of small and delicate mechanisms, such as watches and fine instruments?—D. W. E.

The lubrication of intricate machinery, finely adjusted timers, and numerous instruments, such as watches, clocks, time pieces for bombs and torpedoes, and measuring devices, has become a serious problem. Many of these instruments fail to function because of the use of unsuitable lubricants.

The U. S. Bureau of Standards, co-operating with the Clock Manufacturers Association, has been investigating the requirements of these special conditions for lubrication and the necessary properties of the lubricant. Suitability of the oil may be judged by—availability, chemical stability, action on metals, tendency to escape from pivots by spreading or by evaporation, friction reducing properties, temperature viscosity characteristics.

The oil meeting most of these requirements has for many years been obtained from special parts, the head and jaw, of the porpoise and black fish. However, the increased demands of the last few years have caused heavy drains to be made on the stocks so that the oil cannot be made fast enough to supply the trade. The recent market price of the oil is $125 per gallon. Other fatty oils are objectionable largely because of their instability, the formation of corrosive substances, and their high pourpoint. The objection to mineral oils is their tendency to escape from the bearings by spreading out over the plates and bridges of the timers; also, they are less effective in reducing friction than the fatty oils under the conditions.

The Bureau of Standards has made the following suggestions concerning this problem:

1. To increase the supply of porpoise jaw oil by establishing fisheries, or, more properly, whaling stations, and by artificially propagating porpoises and blackfish.

2. To prevent the deterioration of olive oil, sperm oil, or some other plentiful fatty oil by the use of more scientific methods of preparation or by incorporating a chemical into the oil to increase its stability.

3. To synthesize an oil which would be free from the limitations of fatty oils and mineral oils alike.

4. To use mixtures of petroleum oils and fatty oils, in order to obtain the benefits of the superior qualities of both classes of lubricants.

5. To treat the plates and bridges of the timepieces with a chemical which would prevent mineral oils from spreading, thus permitting the use of these otherwise satisfactory products.

BENZOL CONSUMPTION IN GERMANY

Your report in the March 26, 1931, issue of The Oil and Gas Journal stating the production of benzol shows Germany to be the largest producer, and I would like to ask what are the reasons for this? Does Germany consume more benzol as motor fuel than other countries?—F.G.K.

The use of benzol in Germany as a motor fuel alone and for the purpose of raising the knock rating of gasoline is a result of the shortage of gasoline during the war. Benzol is available throughout a large part of Germany because of the wide distribution of the coking plants, from which it is obtained as a byproduct, and the comparatively low price. It is the important antiknock material, being in fact primarily the only substance used in this way. The use of benzol has been stimulated in Germany by the manufacture of motors with high compression ratios. The domestic consumption has rapidly increased in recent years resulting in large quantities being imported to supply the constantly increasing demand.

The quantity of benzol required by Germany is shown in the table.

BENZOL IN GERMANY

(Metric tons)

	Production	Imports	Exports
1913	190,000	6,700	41,300
1924	185,000	29,480	2,100
1925	240,000	42,500	13,800
1926	250,000	64,100	22,000
1927	300,000	130,900	16,900
1928	320,000	162,850	7,500
1929	370,000	165,100	6,600
1930	350,000	169,800	3,200

The figures may be converted to other units, remembering that the metric ton is equivalent to 2,204.6 pounds, or approximately 301.4 gallons, when accepting the specific gravity of pure benzol at 0.8784, or 29.6 A.P.I., and weighing 7.314 pounds per gallon.

Benzol is not used in large quantities in the United States, the actual consumption being apparently under 1 per cent of the total gasoline, because of the perfection of excellent antiknock gasoline by the refiners, the extensive modification of our gasoline for increased knock rating by chemical methods, and the high cost of benzol. The market price, largely a matter of transportation expense, is at this time much higher than gasoline, consequently large quantities cannot be profitably blended with gasoline in the United States.

SOLVENCY TEST V.M. & P. NAPHTHA

We have been searching for a description of the solvency test which is applied to V.M. & P. and other special naphthas? If you will furnish this the favor will be appreciated.—L. D. K.

The organic solvents, such as the alcohols, ethers, and ketones, have long been used for dissolving gums, so when the special naphthas and close fractions from petroleum were proposed to be used in place of these it became necessary to devise a test by which the solvent value could be determined. Kauri gum, extensively used for the manufacture of varnish, was obtainable in pure form and seemed a satisfactory material to serve as a standard for testing the solvent power of these naphthas.

The kauri gum test for determining the solvent power of aliphatic diluents, special petroleum naphthas, has been described by J. R. Stewart, in Circular 378, Educational Bureau, American Paint and Varnish Manufacturer's Association. The following description of the method has been arranged from this circular:

Preparation of the solution.—One hundred grams of carefully selected kauri gum is weighed into a convenient distilling flask, 500 grams of butyl alcohol added, and the flask then connected with a water-cooled reflux condenser. The mixture is heated to the boiling point of the alcohol, 114.4- to 116.6° C. (238°-242° F.), and the heating continued until complete solution of the gum. This solution is cooled, and after 96 hours is decanted into a clean, dry bottle and well stoppered

Determination.—Twenty grams of the gum solution is weighed into a 200 cc. Erlenmeyer flask, and the naphtha being examined titrated into it from a 50 cc. burette, maintaining a temperature of 25° C. (77° F.), within half a degree. The titration is continued until 10 point print on white paper is no longer legible through the solution. The number of cc. required is the kauri butanol value. A good quality solvent of this type will usually show a kauri butanol value of close to 35 cc.

POTASH DEPOSITS IN TEXAS AND NEW MEXICO

Where are the commercial deposits of potash minerals found in the United States? When were these deposits first discovered and what is the depth below the surface?—E. L. H.

An indication of potash was first noted in western Texas in 1911, in water from a boring at Spur, Dickens County, from a depth of about 2,200 feet, as a result of tests suggested by J. A. Udden, of the Bureau of Economic Geology of Texas. In 1921 this bureau and the federal Geological Survey co-operated in collecting material from deep borings in western Texas which showed potash over a considerable territory.

The principal potash mineral was that year identified by R. K. Bailey, a chemist in the survey, as the sulphate mineral polyhalite, which carries about 16 per cent of potash, and Congress approprited money to be spent for boring test wells at points to be selected by the survey. Beds of polyhalite were found at successive levels in some of these wells and in others which were drilled by private companies either in prospecting for oil or commercial deposits of potash minerals.

Recent explorations by the Geological Survey and the Bureau of Mines in Texas and New Mexico have lead to the discovery of potash resources that give promise of equaling those of France and Germany.

Personal Paragraphs About Oil Men

J. B. Okeson, of the Refinery Supply Company, Tulsa, is visiting East Texas, Arkansas and Louisiana.

* * *

M. Bunecu of the Concordia Company, who has been in California, has returned to Moreni, Rumania.

* * *

B. V. Emery of B. V. Emery & Co., Inc., Tulsa, has returned from a trip to New York and other eastern points.

* * *

John Seiler, sales manager for Tube Turns, Inc., Louisville, Ky., was in Tulsa last week in the interest of his company.

* * *

C. Schofield, purchasing agent for the Caribbean Petroleum Company, of Maracaibo, is at present on leave in England.

* * *

L. C. Batson, of the Oklahoma Steel Castings Company, is spending his vacation at points in Missouri and Arkansas.

* * *

H. J. Scott, vice president Transcontinental Oil Company, Tulsa, is confined to his home for a few days due to a slight illness.

* * *

Arch W. Hyden, purchasing agent of the Minnehoma Oil Company, and family, have gone to Colorado for a vacation by auto.

* * *

H. E. Taubman, president Taubman Supply Company, Tulsa, has returned from several weeks business trip to cities in the southwest.

* * *

N. R. Patterson, Patterson Steel Company, has gone to Boston, Mass., to join his family who have been visiting there, and later will visit his parents in Maine.

* * *

R. E. Whitlock, engineer for Universal Oil Products Company, has returned to Tulsa from Canada where he has been for the past few weeks due to the illness of his wife.

* * *

W. L. Muir, former purchasing agent of the Indian Territory Illuminating Oil Company, Bartlesville, now located in East Texas, spent a few days in Tulsa last week.

* * *

J. Heghorst, formerly with the Shell Petroleum Corporation at Martinez, Calif., and with the Evercyclic Corporation in Crane County, Tex., is now engineer of the Collins Process Corporation.

* * *

Leo Parson, with the Continental Oil Company at Ponca City, Okla., has been transferred to the engineering department of the Texon Oil & Land Company with headquarters at Fort Worth, Tex.

* * *

Ralph B. Roark, superintendent for the northern division of the Shell Petroleum Corporation, Tulsa, has just returned from his vacation in Minnesota lake district, reporting a limit catch of fish that weighed from 1 to 6 pounds each.

* * *

J. H. Moyar of Pampa, Texas, superintendent of operations for the Stanolind Oil & Gas Company in the Panhandle district, was in Casper, Wyo. on his way home after a vacation trip to Yellowstone National park, accompanied by his family. Mr. Moyar was formerly in the producing department of the Midwest Refining Company in Salt Creek field.

* * *

Neal H. Anderson, umpire for the State of California, and R. E. Allen, his chief engineer, left on what is scheduled to be a 1,500-mile automobile tour of the principal oil-producing fields in California. This trip, made to familiarize Umpire Anderson with the new fields recently brought under his jurisdiction, will include every field in the San Jaoquin Valley and coastal district as well as remaining fields in Southern California, which came under his jurisdiction August 15.

A. W. Thompson of Tulsa, has transferred his operations to Dallas, Texas.

* * *

Emil Furst has been appointed general manager of the Vacuum Oil company, Vienna.

* * *

W. M. Bovaird, president of the Bovaird Supply Company, is on vacation in Michigan.

* * *

J. F. Lighthouse of The Texas Company, formerly at Cody, Wyo., is now at Port Arthur, Texas.

* * *

L. D. Cravens, of the Goodyear Tire & Rubber Company, stopped off in Tulsa for a few days.

* * *

Pat Regan, of the Webster Engineering Company, Tulsa, made a business trip to several Texas cities last week.

Men of the Industry

Louis D. Jurs

Louis D. Jurs, vice president of the Associated Oil Company, was born in San Francisco, Calif., January 30, 1885. While completing his early education in the San Francisco schools, he served a draftsman and machinist apprenticeship in the Union Iron Works in that city, before the lure of Alaska took him to Nome on a large construction enterprise. He later returned to California, where he was engaged in engineering work for several years, principally in the powder industry and copper smelting, until he went to Denver, Colo., in 1910, to become superintendent of construction on the Daniels & Fisher Building, which at that time was the tallest structure west of Chicago.

In 1911 Mr. Jurs joined the Associated Oil Company as draftsman, and successively was promoted to the position of chief draftsman, assistant chief engineer, chief engineer, and in 1927 to vice president. As assistant chief engineer and chief engineer, Mr. Jurs had supervision over the company's major engineering projects during its expansion program, which included its main refinery in Avon, Calif.; tank farms, pipe line systems, distributing and service stations, etc. His present duties consist of supervision of the Associated Oil Company's engineering and construction activities, pipe line and tank car transportation, marine facilities, automotive transportation, oil purchases, general purchasing, and telephone and telegraph systems. Mr. Jurs has for several years been an active member of the American Petroleum Institute, and is on several of the Institute's committees.

Walter G. Johnson, former sales manager, has been elected president of the White Oak Corporation.

* * *

C. W. Kennedy, of the St. Louis office of the National Tube Company, was a Tulsa business visitor recently.

* * *

H. F. Quinlan, of the H. F. Quinlan Machinery Company, Tulsa, has returned from a trip to Little Rock, Ark.

* * *

F. W. Dye, president of the Western Supply Company, is spending his vacation at his summer home in Minnesota.

* * *

Harry Wilson, purchasing agent of the Superior Oil Company, is spending a vacation with relatives in Kentucky.

* * *

C. J. Webster of San Antonio, Tex., is making a week's trip to various appointments in the north, traveling by airplane.

* * *

L. D. Armstrong, of the Gaso Pump & Burner Manufacturing Company, and family are spending a vacation in Colorado.

* * *

Harry H. Dean, purchasing agent of the Devonian Oil Company, Mrs. Dean and their children are spending a vacation in Colorado.

* * *

George H. Jacques of Denver, vice-president and general manager of the Midwest Refining Company, was in Casper, Wyo., for a few days.

* * *

Gordon Thomason, sales engineer of the Camp-Morgan Company, Tulsa, has gone to Los Angeles, Calif., where he will become affiliated with the Neilan Company, Ltd.

* * *

G. I. McBride, petroleum engineer for The Texas Company at Shreveport, La., accompanied by Mrs. McBride, have left for a few weeks' vacation in Los Angeles and San Francisco.

* * *

E. L. Doheny, pioneer oil man, has entirely recovered from his recent illness and is expected to be at his office in the Petroleum Securities Building, Los Angeles, Calif., in the near future.

* * *

F. W. DeWolf, vice president and general manager of the Louisiana Land & Exploration Company at Houston, Tex., has resigned, effective September 1, to take charge of the departments of geology and geography at the University of Illinois, at Urbana.

* * *

O. R. Burden, north Texas division superintendent of the Texas Pipe Line Company, has been placed in charge of construction of the pipe line being built by the Texas-Empire Pipe Line Company from Gladewater, East Texas, to Sour Lake, on the Gulf.

* * *

Harry J. Morlang, vice president, Oil Well Supply Company, Tulsa, departed from Tulsa last week, accompanied by Mrs. Morlang, on a vacation trip to Santa Monica, Calif. Mr. and Mrs. Morlang will remain on the Coast during the balance of August and a part of September.

* * *

C. Bascom Slemp, former private secretary of President Calvin Coolidge, was a recent visitor to Tyler, Tex. Mr. Slemp is associated with Earl Calloway, vice president of the Conservative Oil Company, and Walter Caldwell, president of the Gibson Oil Company, in the East Texas Field.

* * *

E. Constantin, Jr., has resigned as president of the Tyler Pipe Line Company and will devote all of his attention in the future to operating the Constantin Refining Company, Overton, Texas. Ernest M. Closuit has been elected president of the Tyler Pipe Line Company and will handle all matters for that company formerly handled by Mr. Constantin.

Oil Industry Equipment and Supplies

NATIONAL TANK MAKING SEPARATOR OF NEW TYPE

The new National dual-control oil and gas separator, made by the National Tank Co., Tulsa, embodies the following features:

1. New diaphragm liquid level and back pressure control.
2. Automatic adjustment of back pressure.
3. Provision for predetermined back pressure adjustment.
4. Operation on pressure or vacuum.
5. Entirely automatic operation on all types of wells.
6. Ease in installing and regulating and other improvements.

The new diaphragm liquid level control is said to deliver more power, be more "trouble-free," and lend itself better for use on a separator. The power developed by the diaphragm increases as the liquid level rises in the tank. It does not occupy space within the separator and its action cannot be retarded by sediment or foreign matter.

The application of back pressure for the purpose of forcing the separated oil from the separator is entirely automatic with the control, and the use of unnecessary pressure is avoided. However, if it is desired to carry a predetermined amount of pressure to supply gas for use, provision is made for adjusting the desired pressure on the separator. If additional pressure then is required to force the oil from the separator, the control automatically applies the minimum amount necessary when needed and releases the additional pressure as the oil level recedes.

The fact that the separator holds the necessary pressure to minimum at all times, and that the oil and gas release valves are oversize for their line pipe sizes, accounts for the unusual capacity of the new National at low pressures. The particular manner in which the control operates the valves, which is by opening the oil valve wide before applying any additional pressure, gives the proper interval before applying the extra pressure.

The new National is said to perform as well on minus pressures as on plus pressures. No oil can enter the gas lines for the reason that a rise in the oil level above normal will close the gas outlet valve, relieving the vacuum within the separator until the oil level is again at the normal stage.

On heading or steady flowing wells alike, this separator is said to give perfect separation at all times, applying back pressure only when needed and then only in the exact amount required. It assists in obtaining maximum recovery in that it offers no unnecessary resistance to breaking out or flowing.

The Elgin blow-down system with the Eckel precision control is described in a four-page publication prepared by the Elgin Softener Corp., Elgin, Ill.

AMONG THE EQUIPMENT HOUSES

The Oklahoma Contracting Corp., Dallas, Tex., has moved its general offices to the Tower Petroleum Building.

W. H. Curtin & Co., temperature instruments, steam appliances, etc., Houston, Tex., have moved into larger quarters at 2019 Franklin Avenue.

L. S. Hamaker, advertising manager of the Republic Steel Corp., has been made manager of sales promotion, according to an announcement by N. J. Clarke, vice president in charge of sales. Mr. Hamaker's headquarters are in Youngstown, Ohio.

O. C. Elliott, formerly Wickwire Spencer Sales Corp. representative in Wichita, Kans., has been transferred to Tulsa office to take charge of Wickwire wire rope sales.

The Maloney Sales Corp., handling Maloney tanks and Muskegon separators, has opened in Willow Springs, Tex., a branch office and yard with stocks of both. The branch is in charge of Joe Coulter who has been transferred there from the Texas Panhandle.

H. R. Bowers, formerly with the Bailey Meter Co., is now manager of sales and advertising for the Meriam Co., Cleveland, Ohio, manufacturer of flow meters.

The Meriam Co., Cleveland, Ohio, manufacturer of flow meters, has appointed the Anderson Engineering Co., 42 Church Street, New Haven, Conn.; Leonard Maleson Co., 815 Locust Street, Philadelphia, Pa., and S. D. Shook & Co., 528 Duquesne Way, Pittsburgh, Pa., as representatives in their respective territories.

ACE-O-PAX PACKING NOW MARKETED IN COIL FORM

The Paxall Co., Inc., Cranford, N. J., announces that Ace-O-Pax plastic packing may now be obtained in coil form as well as loose. The purpose of the coil

packing is to permit greater convenience in installation work with particular reference to such units as closely coupled centrifugals, equipment having deep stuffing-boxes, very hot units, polish rods, gate valves and other valves.

The coil packing is put up on spools in four sizes of cross section which cover the entire range of sizes in which packing is used.

TO HANDLE TRU-STOP PARTS

Arrangements have been completed between the Russell Manufacturing Co. of Middletown, Conn., and the American Cable Co. of Bridgeport, Conn., by which the former will handle the exclusive replacements distribution of the Tru-Stop brake. The American Cable Co., an associate company of the American Chain Co., has been from the first a user of Rusco Durak material made by the Russell Manufacturing Co. for the Tru-Stop emergency brake lining segments. This brake is used by bus and truck manufacturers. Under the new arrangements the Russell Manufacturing Co. will have complete charge of the national replacement sales.

CONTROLS INDOOR LIGHT

The General Electric Co. announces the CR7505-D3 indoor lighting control relay designed to meet indoor demand for an equipment to turn artificial lights on and off automatically within a room or building depending upon the light intensity. Photoelectric and pliotron tubes are used. The auxiliary equipment includes two potentiometers which can be adjusted from the front of the enclosing case, a sensitive relay, and a normally open contactor with two insulated, single-pole interlocks. There are also included the necessary transformer, resistors, etc.

TAYLOR DEVELOPS FULL LINE OF PIPE FITTINGS

The Taylor Forge & Pipe Works, Chicago, have developed a complete line of seamless steel pipe fittings for welding consisting of elbows, tees, reducing tees, bull plugs, and reducing nipples, as well as Taylor forged steel butt welding flanges which have already been on the market three years. All sizes to 24 inches inclusive are promised for distribution within the near future, but at this time only sizes 12 inches and smaller are available. The tees are 2 inches to 8 inches.

This line of seamless pipe fittings permits entire pipe systems fabricated by welding to be installed with only the use of true circumferential welds. Erection is simplified. Taylor fittings are light in weight and therefore require fewer and lighter supports. They require less space in erection, and in addition, permit easy and economical insulation.

Manufacture is on a mass production basis employing patented processes to a great extent. The elbows are made without thinning or buckling of the walls, and have the advantage of short tangents to facilitate welding and accurate lining up. Elbows are made of the standard center-to-end measurement of American standard extra heavy screwed fittings, and with end-to-center-to-end dimension equal to 1½ times the nominal pipe diameter. The ends are machine tool beveled, as in all Taylor forge fittings. Machine tool beveling provides a smooth, clean surface for welding, and makes for maximum accuracy as well as installation ease.

Taylor forge tees are a forged tubular product, made to pipe thickness at the ends, with the body thickened up especially around the outlet to give required reinforcement. The basis of design for the tee, as well as the other welding products, has been to make the fittings of an installation of welded fabricated pipe the strongest parts of the line. Flow or friction has been carefully considered in design. The tees have sweep outlets, a feature especially important for lines of high velocity.

The reducing nipples are designed especially for welding, with the length sufficient to aid installation. The smooth, well-balanced shape of the reducing section assists in fostering easy and unimpaired flow. The bull plugs are forged under approved forging conditions, formed to an ellipsoidal shape to withstand end pressure and made with a surplus of straight section for easy and simple attachment to pipe.

NEW BJ TUBING HOOKS HAVE SAFETY DEVICES

A new BJ tubing hook is offered in two sizes, the "50" with a safe load capacity of 50 tons and the "75" for 75-ton loads. Byron Jackson engineers say a hook designed and built for handling tubing offers more safety and efficiency in operation than the custom of using a large rod hook for short strings of tubing and a small casing hook for longer strings.

In common with other new BJ hooks, both of these tubing hooks are equipped with a patented locking arm which in the open position extends outward from the bill of the hook, thus serving as a guide to facilitate picking up the elevator bails. This locking arm closes and locks automatically when the load is taken and the possibility of elevator bails jumping clear of the hook is eliminated. A further, and perhaps the most important, feature of this locking arm is that it connects the bill of the hook with the body to form a closed link, thus producing load-carrying and shock capacity not possible in an open-type hook of equal dimensions.

Not only do these hooks automatically lock when the load is taken, but they cannot be unlocked thereafter except by the operator, and not fully opened until the load is removed. This safety feature will appeal to operators who have experienced accidents.

The balanced construction, safety features and ease of operation of these hooks are discussed in literature which will be forwarded upon request by Byron Jackson Co., Box 1307, Arcade Station, Los Angeles, Calif.

BLUE-PRINTING EQUIPMENT

The new Pease "Peerless" Model 25 continuous blue-printing equipment is composed of three units—the blue-printing machine, the washing machine, and the potashing, washing and drying machine. The blue-printing machine can be operated independently of the washing, potashing and drying equipment by means of a simple clutch adjustment. Also, it may be purchased separately and the washing, potashing and drying equipment added later when desired. All units are made in two sizes, 42 inches and 54 inches wide and the machines can be wired to operate on either 220 volts direct or alternating current. The 42-inch machine is equipped with six lamps and the 54-inch machine with seven lamps. Each lamp consumes 6½ amperes on direct current and 7½ amperes on alternating current, but this amperage can be increased if faster printing speed is required.

product of Standard Oil of Ohio
Heat Tempered *at 1100 degrees*
Using Vogt drop forged steel valves *and* fittings

The Standard Oil Company of Ohio was fully justified in their selection of Vogt Drop Forged Steel Valves and Fittings to operate at 1100 degrees in the production of their new super motor fuel X-70.

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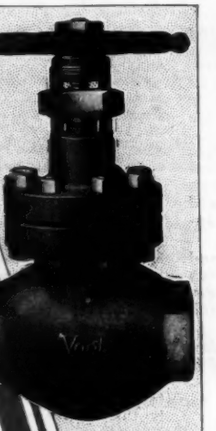
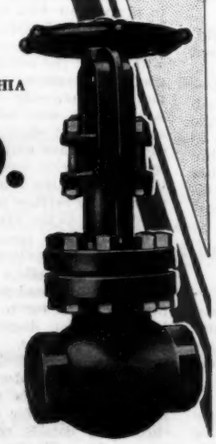
You need not hesitate to specify Vogt drop forged steel when valves and fittings are required for operation at extremes of pressure and temperature.





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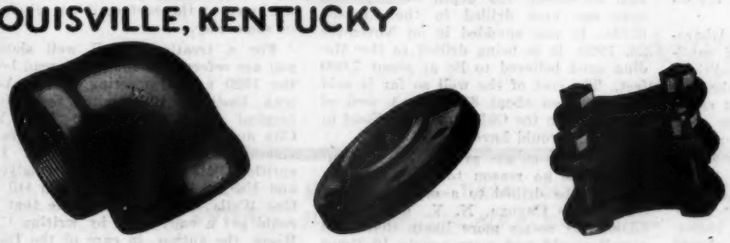

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

SALT DOMES IN OKLAHOMA

Throughout the Gulf Coast territory there are salt domes which produce oil. Are there similar domes in this State or is there any likelihood of finding them? —E. Y. T.

The State referred to in the foregoing question is Oklahoma. The answer is provided by Dr. Charles N. Gould, formerly director of the Oklahoma Geological Survey:

"The question of the possibility of salt domes in Oklahoma has been discussed many times and I believe that today the consensus of opinion is that the chances for salt domes in this State are not good. Salt domes occur in several parts of the world, notably along the Gulf Coast in Texas and in Louisiana, along the Baltic coast in Europe, and in some other places. My present judgment is that geological conditions in Oklahoma are not favorable for salt domes."

COMPUTING GAS RESERVES

Will you please give me a list of books, bulletins, etc., dealing with the computatation of natural gas reserves and related problems and tell where I may obtain them?—P. A. H.

If you will refer to the Field Problems page of The Oil and Gas Journal for February 5, March 26 and May 14, 1931, you will find most of the information you seek. It is suggested that you also write to the U. S. Bureau of Mines, Petroleum Experiment Station, Bartlesville, Okla., for its list of publications on this subject. Write also to the Technical Department of the Tulsa Public Library, Tulsa, for a bibliography.

WHAT PUSHES THE OIL?

I read with much interest your answer to a question about the migration of oil in the page about Field Problems and I would like to ask one along the same line. You mentioned that under certain conditions the oil might escape from one stratum of sand to another. Will you tell me please what kind of force pushes the oil from one sand to another? Is there postitive proof that oil does move from one point to another underground or is that simply a theory, generally accepted perhaps, but still a theory?—R. T. H.

The fundamental fact of migration seems to be proved by the fact that oil is found separated from the gas and water which first were mixed with it. This separation is a result of gravity and it determines the order of the three fluids in a reservoir. Gas, being lightest, is found at the highest point in the porous reservoir. The water being heaviest, is at the lowest point. The oil itself, heavier than gas, but lighter than water, occupies a place between the gas and the water. While gas always is found at the top of the reservoir, the oil and water are not always in adjacent parts of the reservoir.

In his works on "Oil Fields in the United States," Dr. Walter A. Ver Wiebe says on this point:

"Another motive force which may push oil and other fluids through porous rocks is the surface tension, or capillarity. The result of this force is to draw oil and water into small openings and pores of capillary size, regardless of the force of gravity (or perhaps it should be said, in apparent violation of the force of gravity). The rise of kerosene on a lamp wick illustrates the process. Since water has a surface tension which is nearly three times as great as that of oil, the pull on water is nearly three times as great as the pull on oil. Since the amount of capillary pull varies inversely as the size of the pore or tube, the water, therefore has a tendency to occupy the minute pores and displace the oil which may be in them. The oil, therefore, follows the line of least resistance when it takes up its position in the more porous parts of the reservoir. The gas which cannot be drawn into capillary spaces by surface tension goes into the largest openings. Capillary openings in a reservoir rock vary in size from 0.5 millimeter to 0.0002 millimeter (for water). In larger pores or tubes, water will follow the ordinary laws of hydrostatics; in smaller pores or tubes, it remains permanently fixed. When oil and water which were originally present in a sandstone and shale stratum adjacent to each other have rearranged themselves in accordance with capillarity, the water in the pores of the shale will make it impervious to further migration and the oil is confined to the sandstone.

"Experiments performed in the laboratory to indicate the influence of capillarity do not reflect the true conditions in an oil saturated zone beneath the surface. This is due to the fact that capillary attraction decreases when the temperature increases. Since the temperature rises in the earth's crust, this means that capillarity decreases with depth. Moreover, there is a difference in the rate of decrease for oil and water. For theoretical details regarding the importance of capillarity, the reader should consult the writings of Washburne and for the results of experiments he should consult the writings of McCoy.

"The importance of moving water as a factor in the migration and accumulation of oil has been brought out by Munn and more recently by Rich. Water moving through porous rocks may carry oil with it even though the flow of the water is exceedingly slow. Artesian water which is under pressure because the aquifer is saturated with water below a certain level travels toward a point where it can escape. A good example of an aquifer in this country is the Dakota sandstone which underlies thousands of square miles in the western part of the Rocky Mountain geosyncline. Accumulation is thought to result in this case from the selective segregation of the oil and gas which have a tendency to work up toward the roof of the aquifer. When a favorable trap is encountered in the path of migration, the oil and gas will be left behind and will, therefore, accumulate in such traps."

WHY WAS IT CALLED THAT?

GUDGEON

A gudgeon is an iron or steel pivot fixed in the end of a wooden shaft, as of a bullwheel. Rankine in his book on "Mechanics" makes an emphatic distinction between a gudgeon and a journal, notwithstanding the fact that some authorities treat them synonomously. A journal, Rankine says, is that part of a shaft through which a twisting movement is or may be exerted, while a gudgeon is an extension of the shaft, transmitting little or no motion. The word "gudgeon" comes from the French "goujon."

WHAT DOES IT COST TO DRILL?

We have been asked to put some money into the drilling of a gas well in the vicinity of Cayuga, N. Y. This is going to be a private enterprise, but there is something that does not seem clear to us, and perhaps you can clear it up for us. The promoters say they are going to drill to 6,000 feet if necessary and are going to start drilling as soon as 5,000 units at $1 a unit are sold. At this rate it would appear that it would cost about $1 a foot or less to drill the hole. Can a well 5,000 or 6,000 feet deep be drilled for $5,000? What do you think as to the probable cost of drilling this well?—J. S.

The cost of drilling wells in the Tioga district of Pennsylvania seems to offer about as fair a criterion as is available in estimating the probable cost of drilling the well of which you write. The deepest well in the Tioga area is the Lycoming Natural Gas Co.'s No. 1 Shoemaker near Somers Lake. It was last reported drilling at 6,670 feet. This is said to exceed the depth of any well save one ever drilled in the Eastern fields. It was spudded in on November 23, 1930. It is being drilled to the Medina sand believed to lie at about 7,000 feet. The cost of the well so far is said to have been about $50,000. A well of that depth in the Oklahoma City Field in Oklahoma would have cost $150,000.

Such facts as are available in this office afford no reason to believe that a well can be drilled to a depth of 6,000 feet in the Cayuga, N. Y., district for $5,000. It seems more likely that such a well would cost more nearly 10 times that amount of money. It should be pointed out, however, that you do not say explicitly it is expected to drill the well for $5,000. You say simply that the promoters "are going to start drilling as soon as 5,000 units are sold." This might mean that the promoters expect to sell more units after drilling has started.

WOULD SHOT BE OF BENEFIT?

We have completed a well and because of the great depth we were obliged to drill through the producing sands with a very small hole. The sand is very tight and gives up the oil and gas rather slowly. Each sand is over 100 feet in thickness with no evidence of water, but produces only a little over 300,000 feet of gas and about 45 bbls. of 47-gravity, paraffin-base crude. The gas, of course, is very wet, estimated to contain about 5 gallons of gasoline per 1,000 feet of gas.

Could you advise me what the probable results of shooting such a well might be? The bore of this hole is 4 inches. What would be the probable difference in drilling into this sand with a larger hole or otherwise increasing the area? I, of course, would like to have advice and also any reference as to where I might obtain literature on this subject. So far as we can determine by swabbing there is sufficient gas to expel all oil coming into the hole. Therefore, at this time it is not a question of lifting the oil, but of bringing it into the well. The entire column of sand showed saturation, and in the absence of water I feel sure there must be a method of increasing this production.—C. P. J.

To predict the probable results of a shot in the type of sand you describe would be difficult, according to petroleum engineers to whom this question was submitted, and it would be wise for you to get the opinion of a well-shooting expert familiar with your conditions.

It is understood that shots of 100 to 240 quarts are now being used in your field and tamped with wet sand in the ratio of about 2 to 1 for sand and shot. This is different from the older method where the wells were shot with only about 50 or 60 quarts without tamping and the shots repeated as needed.

Before placing the sand tamp above the shot it is the usual practice to form a bridge above the shot with either oakum or willow brush and then dump the moist sand with a side dumping bailer. Care is taken to remove all water from the hole so that only the bridge and moist sand are above the nitroglycerin.

Sometimes broken tile and oakum are used to form the bridge but whatever the material used above the shell may be it has been found that the moist sand tamp will cause the shot to shatter the sand in the best manner and increase the production of oil.

To clean the hole after the shot it has been found possible to remove all debris with a bailer and if necessary it is churned up and down in the hole. This churning action will also assist in expelling poison gas fumes resulting from the shot that might be dangerous to workmen at the surface if not dissipated in some way.

For a treatise on oil well shooting you are referred to the paper read before the 1929 annual meeting of the American Institute of Mining and Metallurgical Engineers held in New York City and published in the Petroleum Division transactions of that year. It is entitled "Manufacture of Nitroglycerin and Use of High Explosives in Oil and Gas Wells" and it is probable that you could get a copy of it by writing C. O. Rison, the author, in care of the Indian Territory Illuminating Oil Co., Oklahoma City, Okla.

For any specific advice about the probable results of a shot it would be best to consult with an expert in your territory for if the shot is placed it should be done in only an approved manner or it might ruin the small well you now have.

A few of the Westcott Orifice Meters at the Knox & Eason gasoline plant, Earlsboro, Okla. The meters shown in the foreground measure the gas of the vacuum line.

Standard
for Vacuum or High Pressure
Flow Measurement

Lines to the plant, lines in the plant, lines from the plant—widely differing ranges of pressure, from those below atmosphere to those of long-distance transmission, have sometimes led to the specification of meters of different makes for parts of the same system.

Result: Several kinds of charts to read; the characteristics of each type of meter to learn separately.

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DEACIDIFICATION OF LUBRICATING STOCK

(Continued from Page 22)

that the acid treatment actually is not complete at the time agitation is usually discontinued and because it is not practicable to overload the filter with free settling, heavy sludge. In other words, the prior settling has economic value dependent upon the color of finished oil, sludge capacity of the filters, and the effect of this sludge upon the throughput rate.

The oil is drawn off into a second agitator which serves as a filter feed tank and filter aid should be added at once. The filter aid is stored in a separate tank, in oil suspension of constant density so that the per cent concentration is always known. The filters are fed by large bore, low speed, triplex plunger pumps. Kelly filters are best for this work, incorporating construction for the severest service with up-to-date labor saving design. The filter elements are dressed with a special cloth manufactured from blue African, acid resistant asbestos.

In all this work care was taken to use the most efficient filter aid obtainable, attention being directed more to good flow rates than clarity, and especially to the cost of aid per ton of oil. It may be noted parenthetically that the filtered oil is frequently dark in appearance but this is no criterion as the tests on finished oil will readily show. Filter aids should combine uniformity, effective sludge removal, and good flow rates. They should be inert, of low apparent density and free filtering characteristics. Acid pepper and colloidal sludge are picked up by these amorphous particles which serve as a base for precipitation and form a bed of porous texture in the filter which retains all of the suspended solids.

Start of Filtration

Filtration is begun by precoating which consists of circulating through the filter a volume of clean oil containing sufficient aid to form a first uniform deposit one-eighth to three-sixteenths-inch thick upon the cloth. The oil may be clean finished oil from storage or once treated once filtered oil from the previous cycle, provided the acidity is not too high. The precoat functions to protect the filter cloth, to reduce the volume of first cloudy filtrate and to facilitate cake discharge. Through the precoat, without release of pressure, is pumped the acid oil to which has been added a further quantity of filter aid. This further addition serves to protect the precoat and, by keeping the cake porous, obtains cycles of long duration.

The filter cake is blown with air or flue gas at the end of the cycle and the entrained sludge plus oil runs about 28.5 per cent by weight on cake, most of this being sludge. The cake is dry and easily discharged. A typical cycle of operation follows:

	Minutes
Filling filter	5
Precoating	7
Filtering	260
Draining	3
Blowing	10
Cleaning	15
Total	300

It will be observed that the actual filtration occupies (260/300 =) 86.7 per cent of the complete cycle, and the nonproductive "dead" time is only 13.3 per cent.

Laboratory control determines accurately the optimum conditions of settling and filtration. A certain minimum contact is required between acid and oil. The acidity of the filtered oil should be only that which may be termed in solution; and must vary with the detention period as well as prior treatment. The time of detention also governs the volume of sludge left in suspension and the filter-aid consumption for a given flow rate. It is a general principal that up to a certain point the rate of filtration can be increased by increasing the ratio of filter aid to compressible solids. Temperature of filtration should not be increased over treating temperature to facilitate sludge removal.

Figure 2 is given in amplification of our previous statements regarding long settling as an overtreatment. Stocks from two different crudes were acid treated in the same manner and settled up to 30 hours. Samples were taken periodically and tested for color against the untreated stocks, the color being a measure of actual color plus suspended sludge. Other samples taken simultaneously were filtered through filter aid to remove the sludge and immediately read for color on a Dubosc colorimeter as above. The curves indicate that whereas the optimum settling time for color seemed to be 22 hours in this case, actually the "true" color of the oil was best after eight hours.

The following photoultramicrographs show some comparison between filtered and settled oil, samples being taken at random from refinery scale standard operations.

Russian and Polish Oils

Russian and Polish stocks generally are treated in three steps totaling 6 to 8 per cent acid. Filtration was conducted as already described, taking the oil after the third treatment and filtering as rapidly as possible under a maximum pressure of three atmospheres. As most European refineries long ago abandoned percolation for contact bleaching, our filtered sour oil was promptly treated with contacting clay and filtered again. No mention will be made here of the ramifications of contact filtration which varies with the crude, the question of dewaxing, and many other factors. Where the utility of contacting has been in doubt, however, it will be required to reconsider previous information in the light of economies effected by this process for deacidification.

Table 2 represents some of the results obtained. It is of interest to note that the 190 viscosity oil was simultaneously centrifuged and under favorable conditions obtained an instantaneous sample of 3.5 neutralization number. The entire centrifugal batch was of considerably higher test; no attempt was made to measure the oil lost through the sludge discharge cover. Neither was any attempt made to investigate more closely the question of acid reduction by filtering. The saving in clay and increase in yield of oil due to prompt handling and complete removal of pepper, among other advantages was deemed sufficient to warrant adoption of the process as standard practice. The use of precipitating agents was later abandoned as it was found that better results could be obtained by putting this money in additional filter aid.

Light Colored Oils

A variety of imported crudes were tested in another country and the results are of especial interest to manufacturers of light colored oils for transformers and turbines, white oils of the medicinal class, and cable oils.

No precipitating agents were employed in the above group. Filtration was accomplished at 50 pounds per square inch maximum pressure. Most of the oils were treated with 20 per cent oleum in amounts totaling as high as 75 per cent by weight on the heavier oils and of course, in multiple step. Data on the clay treatment is not available for publi-

TABLE 3

Visc. in. Saybolt Universal at 130° F.	Prior settling period hours	Filter aid per cent	Per cent H_2SO_4 Before	Per cent H_2SO_4 After	Flow rate bbls. per sq. ft. per day*	Reduction of acidity per cent	Remarks
60	15	...	0.78	....	....	..	(†)
60	6	0.5	0.80	0.44	7.75	45	(†)
65	19	...	0.20	....	....	..	
65	6	0.5	0.23	0.046	9.31	80	
175	18	...	6.9	....	....	..	
175	6	0.5	7.1	2.9	3.41	59	
175-A	15	...	2.1	....	....	..	(‡)
175-B	6	0.5	2.5	1.2	5.42	52	(§)

*42-gallon barrels. †Best result centrifuging—neutralization No. of 0.68. ‡A—Settling. §B—Filtering.

TABLE 4

Oil	Process after acid treatment	Neutralization solution °Be.	Neutralization solution Per cent wgt. on oil	Emulsion formed on oil %	Oil to be reprocessed Per cent in emulsion	Oil to be reprocessed Per cent on total oil
175-A	Settling	20	18	31.5	37.0	11.6
175-B	Filtration	25	11	25.0	20.0	5.0

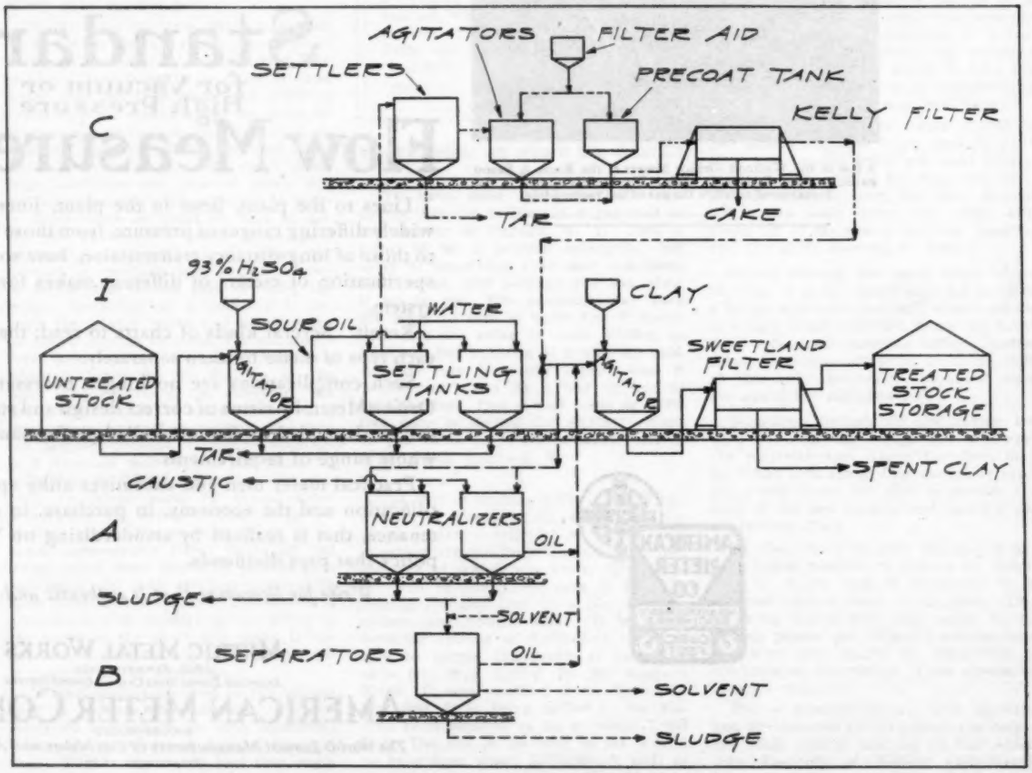


Figure 5—Flow sheet for refining petroleum, deacidifying by filtration. 1—Usual refining of light stocks; A—Additional process—medium stocks. B—Heavy stocks. C—Deacidification by filtration.

TABLE 5

Viscosity in Saybolt Universal at 130° F.	Prior settling period hours	Filter aid per cent	Flow rate bbls. per sq. ft./day*	Neutralization number mg. KOH per gm. oil Before	Neutralization number mg. KOH per gm. oil After	Dry lime per cent	Finishing earth Type	Finishing earth Per cent	Reduction of acidity per cent	Reduction of earth per cent	R.E. No. Min.	Color Klett	Reversion Klett
80	12	...	....	1.86	....	1.0	Toula	6	..	..	1.0	0.85	1.40
80	3.5	0.4	1.74	2.24	0.336	0.3	Toula	2	85	67	0.5	0.85	1.14
160	14	...	....	1.20	....	1.0	Toula	10	..	..	3.0	0.67	1.85
160	3	0.5	0.98	1.79	0.84	1.0	Toula	10	53	..	1.5	0.55	1.33
160	3	1.0	0.78	1.45	0.34	1.0	Toula	8	76	20	1.5	0.47	1.64
160	3	0.5	1.20	1.23	0.56	0.5	Toula	6	54	40	1.0	0.58	1.37
950	48	...	....	2.60	....	2.5	Petrosil	9	..	..	†20	0.87	1.5
950	7	0.7	1.56	3.00	2 24	2.5	Petrosil	8	25	11	8	0.78	1.4
950	6	1.0	2.81	2.91	2.08	2.5	Petrosil	7	30	22	6	0.82	1.3

*42-gallon barrels. †12 ccs. settled.

cation but the great reduction of acidity and excellent flow rates indicate how splendidly the process succeeded in this severe service.

Neutralization Step

Reduction of acidity simplifies the neutralization step. Neutralization of white oils following oleum treatment results in emulsification, occasioning oil losses and the use of expensive solvents. Interfacial surface tension controls the degree of emulsification and is proportional to the normality of caustic solution. The following data was obtained by neutralizing the oil designated in Table 3 as 175-A and 175-B.

The quality of finished oil is an important factor, determined by a series of arbitrary tests. Salient are color, stability, and resistance to emulsification. We were able to check these carefully on oils of Persian origin, no precipitants being used, all results based on batches of from 50 to 200 bbls. Especial attention is directed to the finished oil tests tabulated below, it being remembered that a reduction of neutralizing alkali favors the R.E. No. but detracts from the stability. The stability or color reversion tests were conducted 18 hours at 150° C. in an atmosphere of oxygen.

It is to be regretted that our data on yield are not available for publication. The great reduction in bleaching earth consumption contributes to increased

(Continued on Page 73)

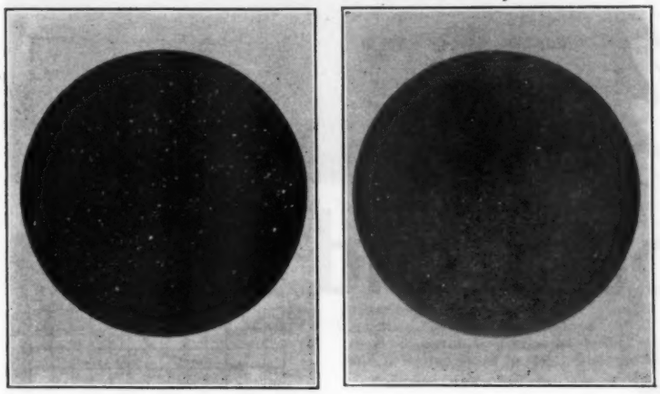


Figure 3—Photo ultramicrographs at 800 magnifications. A—Settled until absolutely clear to naked eye (36 hours). B—Settled 5 hours and filtered.

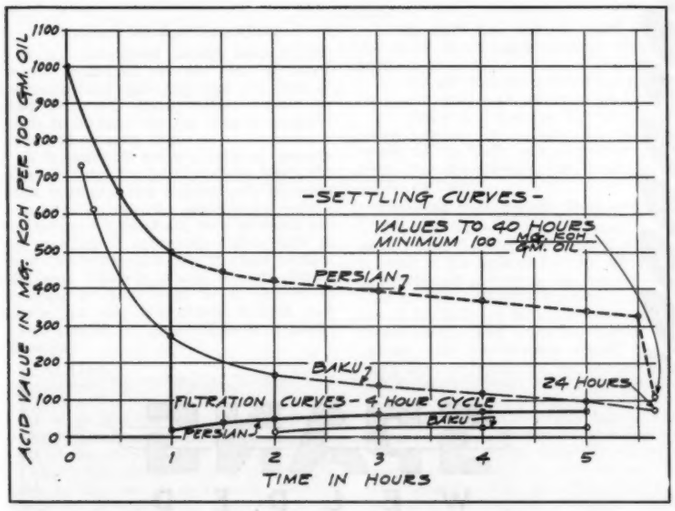


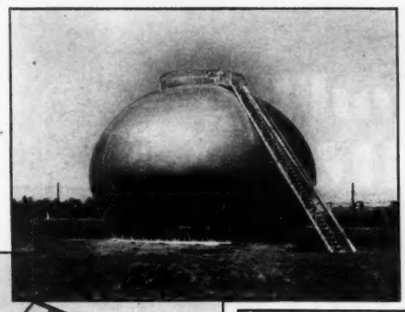
Figure 4—Settling and filtration of two oils of viscosity 180 Saybolt U. 130° F.

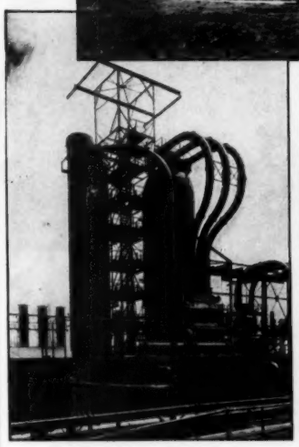
TABLE 6

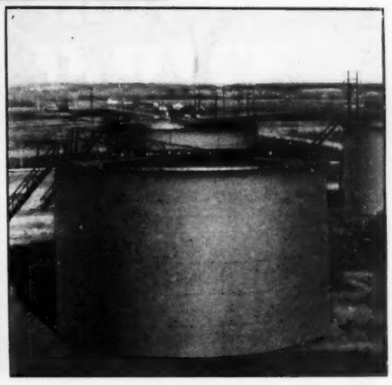
Viscosity Saybolt Universal at 130° F.	Prior settling period hours	Total filter aid consumption per cent	Reduction of settling time per cent	Reduction of acidity per cent	Reduction of bleaching earth per cent	Filtration flow rates based on complete cycles bbls. per sq. ft. per day*	Remarks
70	20	...	...	..	..	...	Settling
70	5	0.2	75	74	43	4.8	Filtration
100	18	...	...	..	..	...	Settling
100	0	0.3	100	92	28	0.5	Filtration
155	18	...	...	..	..	...	Settling
155	4	0.4	78	78	25	7.1	Filtration
170	21	...	...	..	..	...	Settling
170	3	0.5	86	66	40	3.5	Filtration
200	36	...	...	..	..	...	†Settling
200	6	0.7	83	59	..	5.5	†Filtration
200	40	...	...	..	..	...	Settling
200	3	0.4	92	78	50	2.5	Filtration
310	17	...	...	..	..	...	Settling
310	5	0.5	70	75	40	2.3	Filtration
480	48	...	...	..	..	...	Settling
480	5	1.0	89	71	50	1.51	Filtration
950	48	...	...	..	..	...	Settling
950	5	1.0	89	30	20	1.30	Filtration

*42-gallon barrels. †White oil following oleum treatments.

HORTON PRODUCTS







Left: A Hortonspheroid, pressure container for holding volatile products without evaporation loss. Left, below: Typical refinery plate work job under erection by a Horton field crew. Right, below: Several of a group of Horton tanks equipped with Wiggins Pontoon Roofs at a gasoline pipe line station.

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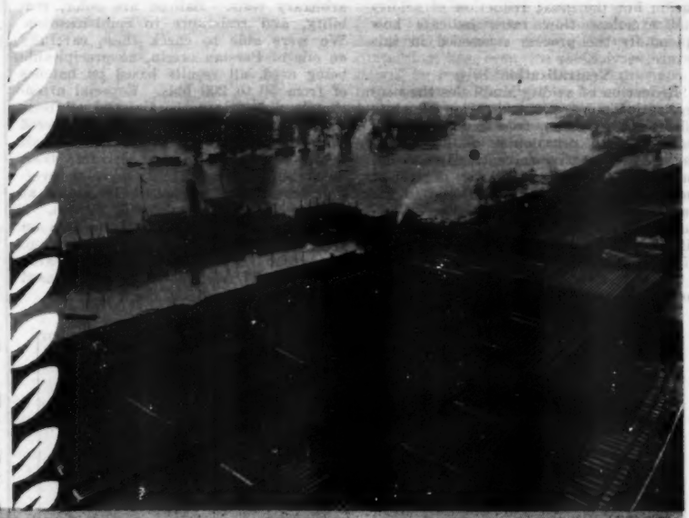
O&GJ 8-27 Gray



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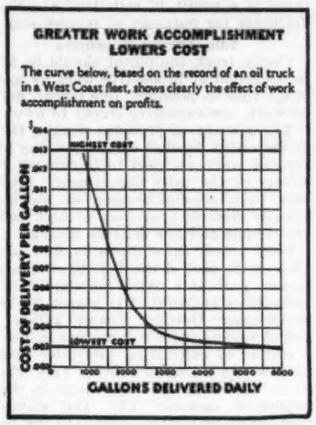
PROFITS GO DOWN IF THE OIL TRUCK LOAFS

(Continued from Page 18)

of oil or a few hundred gallons of gas, and the individual who handles the order has only one aim—to meet the customer's demand by sending out the first available truck. Several instances were observed during the investigation where careless control of this sort actually resulted in dispatching a truck with a small special delivery when there were other orders on hand, going in the same direction.

There is only one satisfactory method of controlling these losses—closer supervision of dispatching and routing of trucks. Haphazard handling of orders—putting them through for delivery without study of the most economical method of handling—is bound to produce waste.


GREATER WORK ACCOMPLISHMENT LOWERS COST
The curve below, based on the record of an oil truck in a West Coast fleet, shows clearly the effect of work accomplishment on profits.
HIGHEST COST
LOWEST COST
COST OF DELIVERY PER GALLON
GALLONS DELIVERED DAILY

Accurate Records Important

Every distributor should keep an accurate record of the per cent of truck capacity used each trip and per cent of load returned. Every effort should be made to increase the per cent of capacity delivered on each trip.

If it costs 23 cents a mile to operate a truck weighing 6,100 pounds, when the tank is empty, and it costs only 26 cents a mile to operate the same truck with a 5,000-pound load of oil, then 90 cents out of each truck operating dollar goes to haul the truck, and only 10 cents to haul the load. That is to say, it costs almost 4 cents to haul each 1,000 pounds of truck, and only .6 of a cent to haul each 1,000 pounds of load. Here is a useful formula:

$$\frac{G \times 100}{N \times C} = \% \text{ of capacity used.}$$

G = gallons (or pounds) delivered.
N = number of trips required.
C = capacity of truck required.

Apply this formula to each truck in the fleet at the end of each week. Concentrate on increasing the per cent of capacity used.

The fact that underload hauling increases the cost of delivery and reduces profits on the load delivered does not mean that it is either sound operating policy or profitable delivery practice to overload trucks. The majority of truck operators have learned, either by costly experience or by careful study of the facts, that overloading does not pay.

The facts about overloads are clear and unmistakable. Every truck is engineered to handle a definite amount of work. Axles, wheels, tires, springs, brakes, frame, and other parts are designed for a definite job. A factor of safety is allowed in each of these parts to provide for emergencies. Every truck will carry a larger load than its rated capacity because this factor of safety is present, but every pound of excess load reduces the margin of safety which engineers have built into the truck as a necessary safeguard against severe jolts, hard pulls, and other strains common to everyday operation.

Assuming that a safety factor of 10 times the weight of the load is allowed in an axle, a bump may produce a stress of eight times the load. Under the correct load, the bump will not harm the axle. But under an overload, the factor of safety is exceeded and the axle is weakened or broken.

Like the Spendthrift

The operator who overloads is like the spendthritt who lays away nothing for a rainy day. For overloads not only reduce the margin of safety, but also increase the violence of road jars and strains which the margin of safety is designed to withstand.

From the standpoint of profitable delivery the vital importance of giving a truck the exact load it is engineered to carry calls for careful specification of body and load weights. Loose tonnage classifications are far from satisfactory. For example, one operator buys a 2-ton truck and mounts a 600-gallon gasoline tank weighing 1,500 pounds. With cab and body mounted, the total weight of this equipment without the load may be 6,500 pounds. Another operator, however, buys the same chassis, mounts an ordinary platform stake body weighing only 700 pounds, and the total weight of the equipment without the load will be only 5,700 pounds. Now if each operator carries the rated capacity load of 2 tons, the question is: With 800 pounds difference in total weight, which operator is carrying the correct load for which the truck was designed? If the tank truck operator is carrying the correct total weight, then the stake truck is underloaded 800 pounds—or, in other words, its true capacity is 4,800 pounds instead of 2 tons. On the other hand, if the stake truck operator is carrying the correct total load, the tank truck operator is overloaded 800 pounds and is in danger of harming his truck.

Tonnage classifications are a useful index for quick reference to the capacity of truck equipment, but the operator who wants maximum economy from the standpoint of loads carried will insist on the following steps in determining proper loads:

1. He will find out the total weight the truck is designed to haul with the greatest economy.
2. He will find the exact weight of the body, cab, fuel and water to be carried.
3. He will determine his most profitable payload by subtracting the total weight of the body, cab, and other extras from the total weight the truck is designed to carry.

Handling Dull Periods Economically

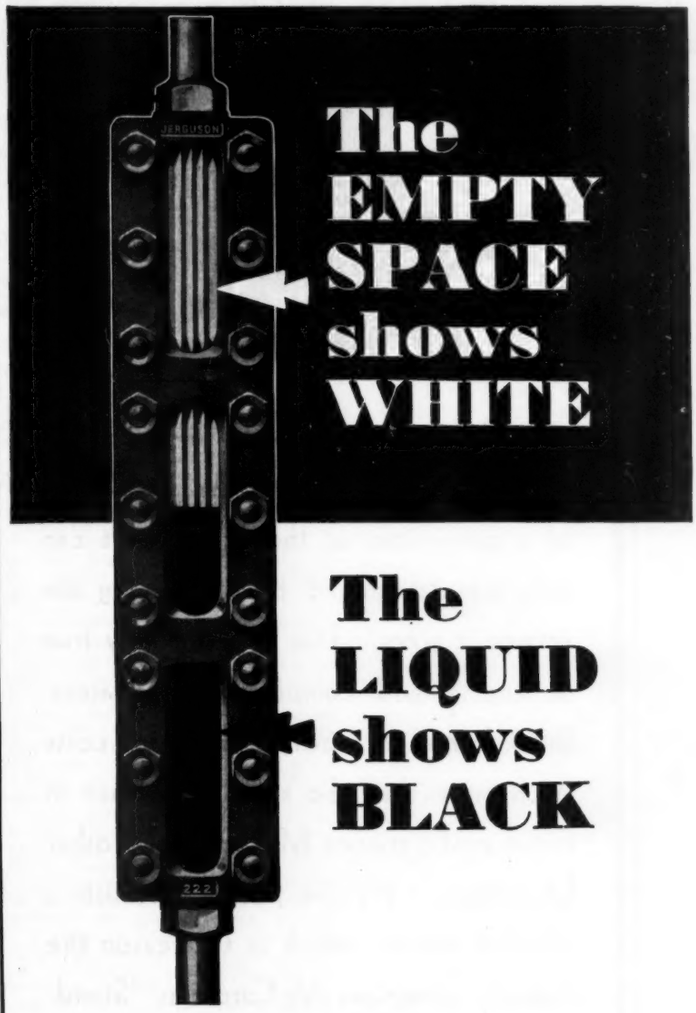
The specialized types of tank equipment which the distributor must have for delivery of the bulk of his products makes it practically necessary for every distributor to own sufficient equipment to handle all his delivery demands—even the extreme peaks. And since his volume fluctuates, the unavoidable result is idle equipment or equipment not producing its full capacity of work during dull seasons.

The problem of keeping equipment busy the year around has become less and less acute for the operator of gasoline and lubricating oil trucks since all-year-round driving has become the rule, rather than the exception, with motorists. Operators estimated, during the General Motors Truck Co. survey, that volume fell on an average of only 10 to 15 per cent in these lines during the winter months. And with so little reduction of volume over two or three winter months, the extra truck time is readily absorbed in carrying on necessary overhauling, painting and other maintenance work which cannot be undertaken economically during busy seasons.

Every distributor should remember, however, that even during dull times it seldom pays to operate more trucks than are absolutely needed to accomplish the work at hand. Operating surplus truck capacity increases operating costs in two ways:

1. The trucks run up excessive mileage. When deliveries which could be handled by four trucks, for example, are split among five or six trucks, there invariably is a duplication of mileage which increases running expense.
2. Drivers' salaries are excessive. Operating one or two surplus trucks means paying salaries to the drivers on those trucks. This expense could be saved or minimized if the truck were taken out of service. In some cases, the distributor may find it desirable to lay off these drivers when dull periods are extended. When this is not practical, however, it is

This gage shows in *BLACK* and *WHITE*



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DETROIT MICHIGAN

more profitable to use the spare drivers for maintenance work, or to use them as helpers on stake trucks, than to operate surplus equipment.

Fuel Oil Delivery the Major Problem

It is in fuel oil truck operation, however, that seasonal fluctuations are a serious problem. Fluctuations in fuel oil deliveries are great, running as high as 70 to 85 per cent, depending largely on the volume of steady, industrial business handled by the fuel oil distributor.

The goal in solving this problem is twofold: (1) The distributor must devise ways and means of softening peak demands so that less truck capacity is required to meet them. (2) The distributor must attempt to build his off-season business or supply other uses for his trucks in order to avoid excessive, costly, idle time.

The following figures, provided by the Burning Oil Distributors Association of Chicago, and based on reports of 11 representative burning oil distributors, show the extent of seasonal fluctuations in sales:

Month—	Gallons	Per cent of total	Per cent of Jan. peak
May	2,600,000	3.4	17
June	2,200,000	2.9	15
July	1,700,000	2.2	11
August	2,000,000	2.6	13
September	4,000,000	5.3	27
October	4,600,000	6.0	30
November	7,800,000	10.3	52
December	11,400,000	15.0	75
January	15,000,000	19.7	100
February	12,000,000	15.8	80
March	8,000,000	10.5	53
April	4,800,000	6.3	32

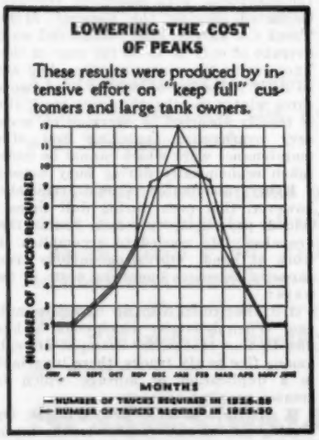
Reducing the Total Number of Trucks

Successful distributors have found that they are able to reduce the severity of peaks in fuel oil deliveries, and thereby keep fewer trucks busy over longer periods, in two ways: By intensive efforts to build a larger volume of "keep full" contracts, and by concentrating sales efforts on large tank owners during dull periods.

"Keep full" business is economical business because it reduces demands for rush deliveries during brief peak periods of severe cold snaps or storms. It is especially effective with the small tank owner since it permits careful routing of a "keep full" truck and prevents rush demands for small orders which must be delivered at a loss.

Similarly, special effort should be made during dull days or periods to sell the large tank owner the full capacity of his tank. The large tank, if filled during a mild spell of weather, will usually last over the brief spells of severe weather which bring rush orders.

A Michigan operator, who intensified his selling effort along these two lines, found that his efforts quickly produced results. The following chart shows his experience during 1928 and his reduced demand for truck capacity after instituting these campaigns early in December of 1929, in spite of more severe weather conditions and greater demands in 1929-30:


LOWERING THE COST OF PEAKS
These results were produced by intensive effort on "keep full" customers and large tank owners.
NUMBER OF TRUCKS REQUIRED
MONTHS
— NUMBER OF TRUCKS REQUIRED IN 1928-29
— NUMBER OF TRUCKS REQUIRED IN 1929-30

Some distributors who handle fuel oil together with lubricating oil and gasoline find it possible to change tanks and deliver fuel oil during the winter months with surplus gasoline trucks. Where such a change works out conveniently, the distributor will be able to reduce delivery costs on both classes of product.

When the surplus trucks are fuel oil trucks, there are several summer season uses which successful distributors have found to reduce dull season losses. One distributor of fuel oil in a small middle western city built up a road oil business which keeps three of his trucks busy during the dull summer months. He found it necessary to purchase special tanks and equipment to use on his fuel oil truck chassis, but this body equipment was more than paid for in the first two years. The bulk of this distributor's road oil business is done in the suburban and rural districts nearby, and consists mainly of oiling roads and driveways for farmers.

Other fuel oil dealers have found that there is a profit in collecting crankcase drainings for purposes of reprocessing.

Idle Trucks Expensive

Costly truck equipment should be kept in operation at productive work as much of the time as possible. Idle trucks, doing no work, are expensive trucks to own.

The amount of probable work a truck accomplishes depends on the quantity and type of work assigned to it through the efforts of the sales department. Profitable work accomplishment, as we have already seen, is a product of high delivery volume and low delivery mileage.

Only sound sales direction and planning on the part of the distributor can increase profitable work accomplishment from this standpoint. The reason for this is obvious. Getting greater gallon or pound volume, with fewer truck miles, is a matter of cultivating profitable customers within a limited delivery area. Profits on any single delivery depend on three important factors: (1) The distance traveled to deliver the order; (2) the time consumed in delivering the order, and (3) the volume, or dollar value, of the order.

A small order to an outlying customer, whose receiving facilities are such that the load must be bucketed, offers a typical situation in which there is no profit on the customer's business. And, conversely, the large volume order, quickly unloaded at a nearby point, offers the greatest opportunity for profit.

The following figures are from observation of a peddler route in the Middle West:

MILEAGE RECORD

Total mileage covered	22.4
Stops	16
Number of sales	10
Stops resulting in no sales	6
Mileage to "no sale" stops	10.2

SALES RECORD

Total gasoline sales (gallons)	225
Total kerosene sales (gallons)	115
Total lub sales	0
Sales less than $1	2
Sales over $1—under $1.50	2
Sales over $1.50—under $3	1
Sales over $3	5

Summary: 54 per cent of load delivered, 46 per cent returned; 62 per cent of stops resulted in sales, 37½ per cent resulted in no sales; 54 per cent of mileage resulted in sales, 46½ per cent was wasted; 31 per cent of stops were profitable, 69 per cent unprofitable; 13 per cent of the cost of gross sales was in delivery.

Profitable sales management for the petroleum products distributor, therefore, means getting a maximum volume of business out of a minimum trading area.

Cost Control Important

This basic rule of sales management cannot be overemphasized. The executive in charge of sales needs to do more than simply cultivate new customers and bring in new business. His job is to bring in profitable business. And his success is measured solely in terms of profitable sales.

The first step in planning for sales that increase profitable deliveries, therefore, is to define clearly the limits of the profitable trading area. Obviously, those limits depend on many factors—traffic, types of customers served, capacity of delivery trucks, and so on. A review of the limits set up by several successful operators, however, shows that the maximum radius in congested metropolitan areas is from 12 to 16 miles; and in less congested rural areas that radius is increased to 20 to 25 miles. It must be noted, however, that the areas covered

by some operators with peddler routes, where volume is ordinarily small, are far too great to produce profitable deliveries.

An accurate estimate of distances to which deliveries can be made profitably, based on the cost of delivery and the volume of orders, should be a part of every sales executive's working equipment.

The maximum limits of a trading area are not the only limits to profitable deliveries. Individual stops on each route are profitable or unprofitable in relation to the same factors—miles covered, time spent, and volume of the sale.

An isolated customer, to whom delivery must be made at the cost of several miles of additional running time, is likely to prove unprofitable unless his volume is large enough to pay a profit on the expense of serving him. Serving him is as expensive as making an underload special delivery of a small order to a customer several miles away.

Two Courses of Action Open

The sales executive who makes a careful study of his trading area to determine which customers are unprofitable from the standpoint of mileage required to deliver, time consumed, and volume of sales, has two possible courses of action open to him for correcting these losses: He can drop the unprofitable customer and seek a more profitable one to take his place, or he can set about systematically to build the unprofitable customer into a profitable one.

Few distributors like to drop customers with whom they have cordial business relations, even when they know those customers are not profitable at the time. Nor is that step necessary in most cases. For there are several ways of building unprofitable customers into satisfactory accounts. And constructive sales management demands this type of sales effort.

Present customers, whether profitable or unprofitable, should be constantly helped to be better customers. The first task of the distributor's salesman is to show his retailers how to become better merchandisers. The distributor's products are not sold until the retailer has moved them from his pumps, tanks and shelves to the consumer. For that reason, the salesman who simply calls on the retailer, kicks his oil drum, checks his stock, and moves on, is doing only a small part of his job. His real job is to help the retailer to sell more petroleum products. That is the only kind of selling that will profit the retailer, the distributor's salesman, and the distributor.

Routes should be planned to demand a minimum of time and mileage. Frequently, the customer whose account is unprofitable because of his isolated location on the route from which he is served, can be made profitable simply by readjusting routes to reduce the mileage required to serve him.

New business efforts of salesmen should be directed toward getting new, profitable customers along present routes. If a new, profitable customer, located near to an unprofitable customer, is added to the route, time and mileage devoted solely to serving the unprofitable customer is reduced. Sales effort should be concentrated into territories now served by the distributor's trucks. That kind of sales effort produces the greatest sales profit, for it increases volume without increasing delivery mileage.

Sound sales management for the petroleum products distributor means keeping an eye constantly open to delivery costs and their effect on sales costs and profits. Profitable sales are the only worth-while sales. And the cost of delivery—more than any other factor—determines the profit in any given sale.

DEACIDIFICATION OF LUBRICATING STOCKS

(Continued from Page 67)

yield. For example, using 0.5 per cent filter aid and saving 4 per cent clay in a refinery running 1,000 bbls. a day means a saving (on a basis of 25 per cent oil entrainment) of at least 35 bbls. of oil. In practice this may vary from 1 to 4 per cent on oil processed.

Different crudes and widely different treatments cannot of course give comparable results. In order to summarize all of the available data we have grouped percentage performance in one general table, making no reference to the extreme limits in any case.

The above data should be conservative in making comparisons with equal performance by other procedures, as in practically all instances we made a finished oil superior in quality to that required.

Costs

An idea of costs can be had from the following estimate based upon 1,000 bbls. per day of a light oil, and a heavy one:

	200 Saybolt Universal Viscosity at 130° F.	950 Saybolt Universal Viscosity at 130° F.
A—Investment—		
Kelly filters, feed tanks, pumps, piping, housing and all accessories installed	$25,590	$32,700
B—Overhead—		
Interest, depreciation, taxes, insurance and miscellaneous @ 20 per cent	5,118	6,540
C—Operating—		
1—Cloth—African blue acid resistant asbestos at $2.75 per square yard and three months' life	1,840	3,312
2—Filter aid at 1.5 to 3 pounds per barrel respectively and $60 a ton	16,425	32,850
3—Labor at 45 cents per man hour, two men, three shifts	7,884	7,884
4—Other maintenance not over 5 per cent	1,279	1,635
D—Total production charges—		
1—Annual	32,546	57,221
2—Daily	89.30	157
3—Per barrel	$0.089	$0.157

Conclusions

This additional expense produces savings which should pay for the installation in from six months to one year. Individual conditions vary greatly, and it is difficult to evaluate quality improvement, so that we choose the more satisfactory method of listing our conclusions below:

1. Oils of low acidity and viscosity filtered with 0.25 to 0.50 per cent filter aid at rates of 5 bbls. per square foot per hour show a reduction of acidity of 75 to 90 per cent.

2. Oils of high acidity and viscosity filtered with 0.50 to 1 per cent filter aid at rates of 2 bbls. per square foot per hour show a reduction of acidity of 60 per cent.

3. Seventy-five per cent less tank capacity is required.

4. Seventy-five per cent less oil must be kept in process.

5. Less chemical neutralization is required and less, if any, emulsification results.

6. A reduction of 25 to 50 per cent of the total bleaching earth is effected.

7. There is a corresponding saving in initial investment for bleaching earth filters, in the cost of operating these filters and less oil losses in the clay.

8. Lower handling charges throughout the treating plant.

9. Filtration obtains 100 per cent removal of pepper sludge, producing a higher yield of oil superior in stability and R.E. No.

10. The total filtration cost is more than offset directly by a cash return in savings and by the many advantages attending this process.

11. Filtration of acid oil requires less investment, less materials in process, operates at lower cost, and effects savings greater than other methods of sludge separation in every case where actual refinery scale comparisons have been made.

There is obviously much further improvement to be made through this process. It reopens entirely the question of contact filtration versus percolation and invites investigation on the best methods of acid and clay treatment. It indicates that continuous and rapid processing is not only desirable but also quite feasible. There is the practicability of producing better quality oils at less or equal cost. It is to be hoped that these results will lead to other investigation that will materially extend the application and increase the benefits of this process to refining practice.

EASTERN FIELDS

(Continued from Page 48)

Sandhill district, operations have not commenced at the Myers Oil Co. rig on the C. M. Strickland farm. This location is a test. In Wood County, work is progressing slowly. The Warren Brothers have spudded in and started drilling on the J. W. Reed farm in Williams district and are at 125 feet. In the same district, Love Brothers have reached 1,215 feet on the Daniel Hoover farm and are about ready to test, and T. J. Rothwell is in the sand at 960 feet on the Rebecca Anderson farm. In Walker district, no further progress has been made at the Four States Oil Co. rig and tools on the John Roberts farm. In Union district, Robert Elder and others have made a location on the William Wilson farm.

Among the new operations, Wilson and Mowery have made a location for No. 3 on the A. L. Baumgardner farm in Cabell County, and Barboursville district. In Guyandotte district, the same operators have reached 1,720 feet on the Hans Watts Realty Co. tract. In Grant district, Doddridge County, W. L. Travis is down to 1,250 feet on the C. A. Stutler farm. In Court House district, Lewis County, W. C. Johnson is about ready to start his test on the John Brown farm. In Wirt County, Bartlett and Boggess are building a rig on the Stella Sheppard farm in Reedy district.

SOUTHWEST PENNSYLVANIA

There were no completions in Southwest Pennsylvania, but two wells are expected in shortly. In the small pool in Buffalo Township, Butler County, close to the Allegheny County line, Charles Heck and others are drilling on the Harbison heirs farm about 1,500 feet southwest of the Johnston Elsenrath No. 1 which came in several months ago at about 75 bbls. a day, and which is still a very fair producer. The well has reached 1,950 feet and will strike the pay during the next week. In West Bethel Township, Washington County, C. O. Inglefield & Co. are down to 2,200 feet on the D. P. Inglefield farm and the tools will pass through a sand shortly.

In Franklin Township, Washington County, the Manufacturers Light & Heat Co. has started a drilling campaign for additional gas and has five wells on the way. On the Laura and Mack Strosnider farm, on the R. B. Lemley farm, and on the D. K. King farm, it has recently built rigs. On the W. L. Ingram farm, and on the Arthur Ingram farm, it has spudded in and started drilling new tests. Neither of these farms adjoin.

SOUTHWEST TEXAS FIELDS

(Continued from Page 39)

to it. It is still drilling and may be carried on down for an extra deep test.

The elimination of it from the field leaves nothing stirring in the Pettus Field immediate district. Mauldin & Fisher's No. 1 Kimball, 7 miles west of the field, is standing after swabbing a little oil at 3,544 feet, and the T. B. Slick estate is not planning to start its offset to J. M. Davis' No. 1 Ray for some time.

There is further cause for discouragement in the Cartwright Field in the southeastern corner of Live Oak County, the No. 14 Cartwright of the Houston Oil Co. having reached 5,400 feet without finding production and it is only 1,000 feet from the No. 23 Cartwright which made a pumper oil well at 3,565 feet. North of the field 4½ miles Catlett & O'Neal have abandoned their No. 1 Hatcher at 5,804 feet. It is 2,700 feet from the east line and 6,200 feet from the south line of the James McGloin Survey.

Alexander and others' No. 1 McFall in the southern part of Bee County and several miles east of the Cartwright gas field which had been standing at 1,870 feet has resumed drilling.

Carsill Oil & Gas Co.'s No. 1 McGee in Jim Wells County about 20 miles southwest of the Cartwright Field is now a gas well. It was shot with 20 quarts of nitroglycerin at 2,770-2,804 feet and is estimated at 7,000,000 feet of gas and 400 pounds pressure. The formation is tight and in lime. Though the company has not announced additional tests it seems likely further drilling will be to the west of the No. 1 McGee which was a big gasser at 2,689 feet but plugged and abandoned as a precautionary measure after it had run wild for several days.

Laredo District

In last week's correspondence operations of the C. J. Webster Oil & Gas Co. and the National Oil Co. of Texas were confused. The two companies are entirely separate and the C. J. Webster Oil & Gas Co. has not taken over any of the operations of the National Oil Co. of Texas. The item was correct as to the C. J. Webster Oil & Gas Co. planning extensive operations and correct as to the facts regarding the W. T. Henry and other tests on National Oil Co. acreage. C. J. Webster is the executive head of both organizations, and their development work promises to be among the most important in the district.

The principal development work now in the Laredo district is at the extreme ends. In Zapata County on the south and northern Duval on the north. Duval Oil Corp. was down below 2,300 feet at the close of last week in its No. 3 Bishop Duval Land Co. and within less than 100 feet of the pay sand. It should be ready to set casing this week and complete next. It is in proven acreage. The company will continue to develop its acreage in this extension to the Schoolfield-O'Byrne Pool in order to fill contracts to deliver oil to the Crown Central Petroleum Co. The pipe line being built by the Humble Pipe Line Co. from this field runs to Benavides instead of to the Kohler Field as first reported and deliveries will be made at Benavides to the main trunk pipe line of the Humble from Laredo to Ingleside.

Two other tests are getting attention in northern Duval. Camp and others are starting their No. 2 Hubbard 1 mile east of the extension of the Schoolfield-O'Byrne Pool, and L. E. Lockhart is down more than 1,000 feet on the No. 1 Sutherland in Survey 511 between the Schoolfield-O'Byrne extension on the north and the Kohler Field on the south.

CANADIAN FIELDS

(Continued from Page 43)

The recent pressure tests have shown that in 11 wells tested in December last, there had been a loss of 225 pounds in average pressure in 235 days. Average pressure for the field is about 1,167 pounds. The highest pressure in a new well was 1,885 pounds, and the lowest 760 pounds in areas where there are many wells. Drops were recorded over an eight-month period of 350 pounds. Several wells in Turner Valley today are using 400,000 feet of gas to make 1 bbl. of naphtha. The naphtha returns some $2.15 while the same amount of gas is worth $125. Thus there is ample reason for conservation."

Imperial Drilling

In South Turner Valley, Imperial Oil, Ltd., still has two tests actively drilling: Southern Lowery's No. 3, LSD 4, Section 9-19-2w5, at 5,153 feet, and Sterling Pacific Oil Co.'s No. 2, LSD 10, Section 33-18-2w5, at 3,188 feet.

In the border areas of southern Alberta, Texas-Imperial's No. 1 wildcat on the Lethbridge structure, LSD 14, Section 22-8-22w4, is drilling at 3,432 feet.

South Turner Valley

In South Turner Valley, Hylo Oils' No. 1, LSD 12, Section 4-19-2w5, is drilling below 3,500 feet. The test got the Upper Dakota at 3,290 feet, with a show of light crude and some gas. The 10-inch casing will be run to 4,000 feet and 8-inch hole carried to the lime, which is expected around 5,100 feet.

Central Turner Valley

In Central Turner Valley, McLeod Oil Co.'s No. 3 LSD 16, Section 1-20-3w5, has finished a difficult cleaning and repair job and is deepening an 8-inch hole

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in the lime. The well originally bottomed at 4,973 feet with lost tools in the hole and several months have been spent sidetracking and fishing.

North Turner Valley

In North Turner Valley, United Oils' No. 4, LSD 2, Section 24-20-3w5, is drilling 149 feet in the lime at 6,043 depth, with a small show of gas. Location is on the east flank of the North Turner Valley structure and some distance from other north end producers.

Taber Well Abandoned

In the border areas, Alberta Pacific Consolidated Oils, Ltd., is reported to have abandoned its Cole-Hunter No. 1, LSD 3, Section 11-10-17w4, near Taber. The well is unofficially reported to have been carried to 3,555 feet or more, after encountering an oil sand around 3,320 feet. It was given three shots in the latter horizon which are understood to have increased the oil and gas showings, but failed to develop commercial production. The test was originally started by an English syndicate headed by J. Campbell Hunter. At 3,303 feet work was discontinued owing to a difficult fishing job. Last winter the test was taken over by Alberta Pacific Consolidated Oils, Ltd., and the well put in shape and deepened, the Cole-Hunter rig being used. No further work is likely to be done on the acreage in the near future.

Mayland Southern Gasser

East of Coutts, Mayland Southern's No. 1, LSD 13, Section 4-1-9w4, on the Alberta end of the international Reserve Dome structure, has resumed drilling after encountering a heavy gas flow in the Bow Island sands at 1,890 feet. The flow was estimated at 12,000,000 feet a day. Between 5,000,000 and 6,000,000 feet additional were previously developed in the upper sands. The big flow was temporarily shut off and the test is deepening to the Sunburst, which is looked for between 2,100 and 2,200 feet. Mayland Southern's No. 1 is stated to be logging 900 feet higher than the Rogers-Imperial gasser to the west. If it fails to get anything in the lower horizon, production will probably be taken from the Bow Island sand.

Border Tests

In the Milk River area, Commonwealth Petroleums' No. 1, LSD 9, Section 9-3-15w4, is reported resuming at 4,932 feet, with standard tools. The drill is working in the lower Devonian lime.

In the Shank Lake area, Parco Oil Co.'s No. 1 Twin River, LSD 16, Section 34-1-20w4, is reported making new hole after cementing 16-inch casing at 1,455 feet. The test got the Benton formation at 1,355 feet.

Announcement has been made that the Canadian Western Natural Gas, Light, Heat & Power Co. is planning to drill a new test for gas in the Brooks area, to increase its supply for the town of Brooks, which is supplied largely from local wells.

Hudson's Bay Tests

In the Keho Lake area, Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, is reported making new hole below 4,325 feet after cementing against caving.

In the Castor area, Hudson's Bay's No. 1 Paintearth, LSD 5, Section 27-39-15w4, is fishing for lost tools in the Devonian lime at 4,675 feet.

Tests in the Foothills

On the Moose Mountain structure, north of Turner Valley, Graystone Consolidated's No. 2 Signal Hill, LSD 9, Section 34-23-5w5, is running double tour and making hole in a very hard formation at 4,172 feet. Some light green crude testing 46 gravity is seeping into the hole. A change of formation is looked for, though the log indicates the lime contact may not be reached for about 200 feet.

Red Coulee Field

On the Montana end of the international Red Coulee structure, Askalta Oils' No. 1 Farbo, SE SE NE, Section 2-37-4w, is reported making between 300 and 400 bbls. a day. Cosmos' No. 1 Farbo, on the same lease, is reported to have dropped to 5 bbls. Alberta Drillers' No. 1 Farbo, SE SE, Section 3-37-4w, formerly Nellie Jane Oil Co., the farthest west well on the Montana side, has been drilled in, after cementing 6⅝-inch casing on top of the Vanalta sand at 2,530 feet. This well is a half mile southwest of Ohio Oil Co.'s No. 2 Farbo, which was finished as a gasser.

Ontario Drilling

In the Oil Springs Field, Lambton County, Ontario, Sarnia Oil & Gas Co.'s No. 8 is reported drilling in the Trenton limestone around 3,300 feet, having encountered four shows of gas in the Trenton.

In Wentworth County, some new drilling is projected for Binbrook Township where a large block of acreage has been secured by the Continental Corp. of Toronto. The Continental corporation has let contract to P. L. Jackson of Dunnville for five tests on its holdings. The acreage is in close to a proven gas area with prospects of production in three sands within the first 600 feet of drilling. Initial production of some wells in the Binbrook area has been reported as high as 1,000,000 feet, with 200 pounds rock pressure, though the initial flows are usually smaller. E. P. Rowe of Toronto is geologist for the company. The Continental corporation also holds acreage in Mosa and Ekfrid Townships, Middlesex County; in Bayham Township, Elgin County; and in Middleton Township, Norfolk County. These areas will probably be tested later.

WILDCAT OPERATIONS IN KANSAS

(Continued from Page 35)

RICE COUNTY

Detrick & Langston's No. 1 Purcell, NW cor. Sec. 33-19-9w ..... Conglomerate 3,225-46 ft.; show oil and water; T. D. 3,275 ft.; plugging back to 3,285 ft.

Cress et al's No. 1 Sharp, SE NE Sec. 13-20-10w ..... Show oil 3,107-15 ft.; Silicious 3,-330-36 ft.; estimated 1,500 bbls.; shut in.

Allison-Fitzwilliams' No. 1 Blake, NE NW Sec. 9-18-10w.. Drlg. 3,286 ft.

RUSH COUNTY

Dewey & Mitchell's No. 1 Greenawalt, C SW Sec. 17-19-16w ..... Drlg. 3,865 ft.; top of conglomerate 3,835 ft.; show oil.

RUSSELL COUNTY

Agate Oil & Gas Co.'s No. 1 Rochfellow, SE cor. Sec. 6-13-12w ..... Shut down 3,274 ft.

Gilbreath et al's No. 1 Bratton, C NE Sec. 33-11-13w .... Show oil 3,090-94 ft.; shut down 3,504 ft.; plugging back to 3,-189 ft.

SEDGWICK COUNTY

Magnolia's No. 1 McLaughlin, NW cor. Sec. 31-28-1w .... Drlg. 2,600 ft.; 2,000,000 ft. gas at 2,548-64 ft.

SALINE COUNTY

Twin Mounds Oil Co.'s No. 1 Weis, C W half NE NW Sec. 20-13-4w ..... Fishing 2,710 ft.

SHERIDAN COUNTY

Flo et al's No. 1 Shoemaker, SE SW Sec. 27-7-26w .... Shut down 2,445 ft.

STAFFORD COUNTY

Rosenthal, Stanolind and Amerada's No. 1 Gray, C NE Sec. 11-24-13w ..... Shut down 2,900 ft.

STEVENS COUNTY

Argus Prod.'s No. 2 Christopher, C NE Sec. 10-33-39w .. Shut down 5,521 ft.

SUMNER COUNTY

Tighe et al's No. 1 Thieson, C NW SE SE Sec. 22-34-2 .. Drlg. 2,090 ft.

Trees Oil Co. and Shell's No. 1 Springate, NE SE SW Sec. 6-34-2 ..... Shut down 1,435 ft.

Spencer et al's No. 1 Porter, NE SW Sec. 12-33-4w ..... Drlg. 2,985 ft.

Olstot et al's No. 2 Marlow, C SE NW SE Sec. 22-33-3w.. Fishing 4,150 ft.

WASHINGTON COUNTY

Sincox et al's No. 1 Penwell, NW SE NE Sec. 16-3-3 .... Shut down 1,720 ft.

WILDCAT OPERATIONS IN OKLAHOMA

(Continued from Page 34)

Holden's No. 1 Phillips, SE cor., Sec. 3-9-18e.....Shut down 1,860 ft.
Marion Oil's No. 1 Sanders, NW NE NW, Sec. 10-9-18e...Shut down 2,387 ft.

HUGHES COUNTY

Wright et al's No. 1 Ott, SE SW, Sec. 15-5-11.....Shut down 1,645 ft.

KAY COUNTY

Lewis et al's No. 1 Harris, SE NW, Sec. 14-25-1.....Location.
Mummert Drlg. Co. et al's No 1 Cormick, C NW SE, Sec. 9-27-2 .....Cleaning out 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 2-26-1W.....Rig on ground.

KIOWA COUNTY

Christian's No. 1 Jones, NE SE, Sec. 8-7-18w.....Shut down 820 ft.

LATIMER COUNTY

P. English's No. 1 Unknown, NW SE, Sec. 16-6-19.....Shut down 1,542 ft.

LINCOLN COUNTY

Mote et al's No. 1 School Land, NW cor., Sec. 36-17-5...Rig on ground.

McINTOSH COUNTY

Patterson et al's No. 1 Smith, SW cor. NW SE, Sec. 32-9-16 .....Shut down 5,733 ft.

MUSKOGEE COUNTY

Sioux Oil Co.'s No. 1 Unknown, NW SE, Sec. 21-11-19 ...Shut down 1,011 ft.

OKFUSKEE COUNTY

E L. Robinson's No. 1 Rice, NW, Sec. 2-10-9.....Location.
Shepard et al's No. 1 Neveas, SE NW SW, Sec. 3-12-10...Shut down 3,690 ft.

OKLAHOMA COUNTY

Citizens Oil Co.'s No. 1 Sage Barber, NE cor., Sec. 21-11-3w .....Shut down 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW, Sec. 17-11-3w .....Shut down 5,515 ft.
J. F. Cuniff, trustee's No. 1 Church Land, NE NW SE, Sec. 17-12-4w .....Shut down 6,700 ft.

PAWNEE COUNTY

Rookstool's No. 1 Wylie, NW NE SW, Sec. 6-20-5.....Shut down 1,950 ft.
Cochran et al's No. 1 Green, NE cor. SW, Sec. 15-23-5....Rig.

PITTSBURG COUNTY

Tape Oil Co.'s No 1 Fulton, SE, Sec. 34-7-14.....Drlg. 1,000 ft.
J. Morrison's No. 1 Fowler, NE SE, Sec. 13-7-17.....Rig.
C. Kennedy's No. 1 Travis, C SW NE, Sec. 15-7-14.....Rig.
C. Canady's No. 1 Jones, NW cor., Sec. 14-8-14.....Rig.

ROGERS COUNTY

Braman Oil Co.'s No. 1 Mare, C SW SE, Sec. 33-19-17....Drlg. 438 ft.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW, Sec. 22-12-24w.....Shut down 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE, Sec 4-11-26w.....Shut down 3,030 ft.

SEMINOLE COUNTY

Sunray Oil Co.'s No. 1 Sunray, NW SE, Sec. 35-5-5.....Location.

WICHITA COUNTY

Cooper & Terhune's No. 1 Blocker, NW cor., Sec. 29-8-19w.Shut down 2,133 ft.
Burns & Prince's No. 1 Deck, SW cor., Sec. 21-8-18 .....Shut down 1,050 ft.

OKLAHOMA PANHANDLE

TEXAS COUNTY

Cimarron Utilities' No. 1 Unknown, C SE, Sec. 1-3-14....Shut down.
Three Way Oil Co.'s No. 1 Crane, SW NW, Sec. 11-1-1S..Shut down 4,750 ft.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Brookshire's No. 1 R W. Rowland, NW NE SE, Sec. 18-3s-10 .....Shut down 530 ft.

BRYAN COUNTY

Bryan County Oil's No. 1 Childs, NW SE SW, Sec. 7-7-10.T. D. 650 ft.
Bush et al's No. 1 Commerce Trust, NE cor., Sec. 35-6s-9 .....T. D. 740 ft.; plugged back to 450-80 ft.

JEFFERSON COUNTY

Smith's No. 1 McCarty, SE NW NE, Sec. 18-4s-8w.....Location.

LOVE COUNTY

Autrey et al's No. 2 Cross, CWL SE NE, Sec. 27-6s-2.....Show oil and gas 970-72 ft. and 1,324-34 ft.; drlg. 1,590 ft.

MARSHALL COUNTY

Taliaferro et al's No. 1 fee, NW SE SE NW, Sec. 34-5s-5 .....Shut down 580 ft.
McCrory et al's No. 1 Little, NW SW, Sec. 30-7s-6.....Bailing 10 bbls. of oil 495-97 ft.; recemented csg.; pumped 110 bbls. 30 hrs.
D. H. Curry's No. 1 Ward, NE SE SW, Sec. 15-5s-6.....Shut down 2,310 ft.

McCURTAIN COUNTY

The Oil Journal's No. 1 Parks, C NE SW, Sec. 9-6s-23...Shut down 320 ft.
Stewart's No 1 Patterson, C SE SE, Sec. 7-6s-24.....Shut down 840 ft.

PUSHMATAHA COUNTY

George's No. 1 Lane, NW SE, Sec. 32-3s-15.....Shut down 840 ft.
Whitehead et al's No. 1 Messer, SE SW SW, Sec. 35-3s-18 .....Location.

STEPHENS COUNTY

Brown's No. 1 Hightower, SW SE NE, Sec. 15-3s-5w.....T. D. 989 ft.; show water.

LOUISIANA-ARKANSAS PROVEN AREAS

(Continued from Page 36)

Hawkins et al's No. 1 Moran, Sec. 1-7-11 .....400 ft. oil in hole 2,620 ft; W.O. S.R.
O. A. Gautier et al's No. 1 Mischell, 330 ft. E, 150 ft. N, SW cor. SE NW, Sec. 30-8-12 .....Testd dry; S.O. 2,400 ft.
Hawkins & Antoon's No. 1 Newton, Sec. 1-7-11 .....W.O., S.R. 2,609 ft.
Hudson & Bird's No. 1 Walden, 480 ft. N, 300 ft. E, SW cor. SW NE, Sec. 26-8-11 .....S.D. 1,625 ft.
Zeke Lohman's No. 1 McCormick, 660 ft. E, 330 ft. N, SW cor. NE SW Sec. 2-7-11 .....Fishing 1,606 ft.
Loring Oil Co.'s No. 17 Bowman-Hicks, 1,600 ft. S, 275 ft. W, NE cor., Sec. 16-7-12 .....Completed flowing 1,600 bbls. 2,-566 ft.
Lyons & Neely's No. 1 Duggan, NW SE, Sec. 14-7-11....Location.
Magnolia Pet. Co.'s No. 1 Peterson, 200 ft. S and E, NW cor. NE NE, Sec. 10-7-11 .....Comp. for 112 bbls. 2,535 ft.
L. K. McGuffin's No. 1 Bush, NW cor. NW SE, Sec. 1-7-11 .....S.D. 400 ft.
Ben Merritt, tr.'s No. 2 Byrd, Sec. 1-7-11 .....S.D. 88 ft.
Houston-Sabine Prod. Co.'s No. 1 Sabine Lbr. Co. (was Triangle Pet. Co.'s No. 2 Sabine Lbr. Co.), 330 ft. N and E, SW cor., Sec. 36-8-12 .....S.D. 2,440 ft.

ARKANSAS

UNION COUNTY—EL DORADO

Lion O. & R. Co.'s No. 9-A G. P. Hayes, 242 ft. S, 246 ft. W, NE cor. Lot 5, NE, Sec. 4-16-15 .....Drlg. 5,138 ft.
Southern Prod. Co.'s No. 1 Wingfield, NE cor. SE NW, Sec. 16-19-15 .....S.D. 2,608 ft.

UNION COUNTY—URBANA

Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. 8½ NW, Sec. 11-18-13 .....T.A. 3,536 ft.
Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13 .....Location.
Wilson & Chapman's No. 1 H. Norman, 330 ft. N and E, SW cor. SE NE, Sec. 3-18-13 .....Drlg. 1,800 ft. shale.

EAST TEXAS

PANOLA COUNTY

Ark.-La. P. L. Co.'s No. 14 Werner, 341 ft. S, 300 ft. W, NE cor. Werner 74-ac. tr., Ben C. Jordon Sur. ....S.W. and abd. 5,020 ft.
Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur. ....S.D. 3,264 ft; wtr.
Dillon & Braham's (was W. G. Banks et al's) No. 1 C. O. Baldwin, 1,395 ft. W, 1,362 ft. S, NE cor. Baldwin 290 ac. in Hampton West Sur. .....S.D. 1,555 ft.
United Prod. Corp.'s No. 17 Steele, 1,320 ft. N, 660 ft. W, SE cor. C. D. Steele lse., in B. C. Jordan Sur. ..Location.
Southwestern O. & G. Co.'s No. 1 E. R. Vinson, 3,005 ft. S, 1,001 ft. W, NE cor. C. T. Anderson Sur. ....S.D. 2,650 ft.

MISSISSIPPI

RANKIN COUNTY

James Alexander, tr.'s No. 1 Wright Cast Stone Co., 200 ft. S, 1,460 ft. NE cor. NE NW, Sec. 13-5n-1e ..Derrick.
E. R. Henderson's No. 1 W. B. East, Sec. 13-9-23, 200 ft S. and 150 ft. W NE Cor. Sec. .....Rigging up.

WILDCAT OPERATIONS IN MISSISSIPPI

ADAMS COUNTY

Company, farm and location— Remarks:
Ark-La P. L. Co.'s No. 1 Brandon Hall Farms, 201 ft. from W line, 390 ft. from S line, Lot 32, Brandon Subd., Sec. 61-18n-1w .....Rigged up and S.D.

CLARKE COUNTY

Gulf Ref. Co.'s No. 1-A Long Bell Lbr. Co., C SW SW, Sec. 10-2n-16w .....Drlg. 624 ft.

CLAY COUNTY
(Cable tools)

Ohio Oil Co.'s No. 1 Cantrell, NE cor., Sec. 16-15-5 ....Drlg. 4,649 ft.

HINDS COUNTY

Community Gas Co.'s No. 1 Millsaps College, Sec. 34-6n-1e .....Comp. for 41,429,000 ft. gas 2,438 ft.
Howard Oil Co.'s No. 1 Jackson College, C NW NW, Sec. 9-5-1e .....S.D. 74 ft.
Southern Pet. Co.'s No. 1 Wilson (was Tri-State O. & G. Co.'s), 320 ft. E, 240 ft. N, SW cor. SE NE, Sec. 28-6-1e .....S.D. 20 ft; W.O.

HUMPHREYS COUNTY

Danciger O. & G. Co.'s No. 1 Belgrade Lbr. Co., C NW, Sec. 29-14n-4w .....S.D. 212 ft.

JASPER COUNTY

Bay Springs Pet. Co.'s No. 1 Keyes, C NW NE, Sec. 2-12-9 .....S.D. 2,360 ft.

JEFFERSON COUNTY

Stokes & Cleve Love's No. 1 Phillips, Sec. 14-10n-2w ..Drlg. 2,160 ft.

MONROE COUNTY

Amory Dev. Co.'s No. 1 Bourland, Sec. 2-13-19 .....S.D. 3,015 ft.
McAlpine et al's No. 1 Cowart, second hole, Sec. 2-12-19. S.D. 3,404 ft.

NEWTON COUNTY

Bob Talton et al's No. 1 Majure, 400 ft. N, 600 ft. W, SE cor., Sec. 25-16n-11e .....Rigging up.

NOXUBEE COUNTY

Thompson & Donohue's No. 1 Donohue, Sec. 25-16n-17e ..Drlg. 1,585 ft.

RANKIN COUNTY

Attkisson & Dyer's No. 1 Valentour, 200 ft. S, 200 ft. E, NW cor., Sec. 18-5n-2e .....S.D. 31 ft.
Gulf Ref. Co.'s No. 1-A Hanna, Sec. 23-6n-1e .....D.S. stuck 2,745 ft.; T.D. 2,815 ft.
Hardin & Flint's No. 1 Webb, center Lot 32, Blk. B, East Jackson Pl., Jackson City Subd., Sec. 12-5-1 ..Rebuilding derrick.
Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e. Derrick.
R. A. Moore et al's No. 1 Interior Lbr. Co., Sec. 28-6-1e.. S.D. 900 ft.
Square Deal O. & G. Co.'s No. 1 Spann, NW cor. SE NE, Sec. 13-5n-1e .....Sidetracking 4-in. csg., T. D. 2,321 ft.
Willis & Culley's No. 1 Applewhite & Holden, 10 ft. N, 60 ft. E, SW cor., Sec. 12-5n-1e .....Derrick.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-8-9 .....Derrick.

WARREN COUNTY

Eagle Bend O. & G. Co.'s No. 1 Kiger, SW cor. SW SE, Sec. 9-18-2 .....S.D. 2,607 ft.

WEBSTER COUNTY

P. J. McAlpine's No. 1 Henly (was Cumberland Oil Co.'s No. 1 Henly), SE NW, Sec. 15-21n-11e .....Coring 1,800 ft.

WINSTON COUNTY

Miss. Drlg. Co.'s No. 1 Scarbrough, NW cor., Sec. 15-12-14 .....Drlg. 3,639 ft.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 36)

E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW, Sec. 30-13-15 .....S.D. 2,140 ft.
Rellitt Oil Co.'s No. 1 Ganno hrs., 300 ft. S and E, NW cor. NW NE, Sec. 12-11-16 .....Drlg. 1,914 ft.
Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13 ....S.D. 1,266 ft.

LA SALLE PARISH

Gulf Ref. Co.'s No. 1 Tremont Lbr. Co., 668 ft. N, 632 ft. E, SW cor., Sec. 10-9n-2e .....Rigging up.

NATCHITOCHES PARISH

W. M. Coats' No. 1 Collins, 730 ft. N, 50 ft. E, C, Sec. 28-9-10 .....T.A. 4,091 ft.
J. W. Cooper et al's No. 1 Cooper, NW SW, Sec. 35-11-10 .....S.D. 3,156 ft.
Cooper et al's No. 2-A Cooper, C SE SE, Sec. 32-11-10....S.D. 1,518 ft.
C. M. Talley et al's No. 1 C. M. Talley, 1,980 ft. W, 660 ft. S, NE cor. SE, Sec. 29-11-10 .....Tested dry; S.D. 1,380 ft.

RAPIDES PARISH

Pelican Nat. Gas Co.'s No. 1 Long Bell Lbr. Co., 330 ft. N and E, SW cor., Sec. 3-1n-3w .....Began Aug. 15; drlg. 200 ft.

RED RIVER PARISH

La. Oil Dev. Co.'s No. 2 La. Delta Pecan Co., 2,950 ft. S, 300 ft. E, NW cor., Sec. 27-13-11 .....Spudded in; S.D. 50 ft.
Mack Jourden Co.'s No. 1 Lockett, 4,035 ft. S, 1,080 ft. E, NW cor. SW, Sec. 29, in Sec. 32-13-10 .....Washing to bottom 2,500 ft.

RICHLAND PARISH

Alto Gas Co.'s No. 2 Hunt, 660 ft. S and E, NW cor., Sec. 13-17-5 .....Derrick.
National Gas Co.'s No. 1 Singletary, 1,980 ft. N, 660 ft. W, SE cor., Sec. 20-18n-7e .....Rigging up.
Richland Operating Co.'s No. 1 Baremore, 730 ft. S, 950 ft. E, NW cor., Sec. 19-16n-7e .....Began Aug. 7; set 12½-in. at 185 ft; 8-in. at 960 ft.
Southern Carbon Co.'s No. 1-B C. M. Noble, 2,966 ft. N, 1,525 ft. W, cor. Secs. 7, 8, 17 and 18, in Sec. 37-15-6..Location.

SABINE PARISH

Diffie & Barnett's No. 1 Lites (was J. W. Clark's), 330 ft. N, 330 ft. W, SE cor. SW NW, Sec. 34-8-11 .....S.D. 105 ft.
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 420 ft. S, 200 ft. W, NE cor. NW NW, Sec. 10-8-13 .....S.D. 3,628 ft; (corrected depth).
Langbridge Oil Co.'s No. 1 Stephens, 330 ft. N and E, SW cor. SE NE, Sec. 17-9-11 .....Reaming to bottom 2,215 ft.
J. J. Keen, tr.'s No. 1 Belton (no check), Sec. 31-9-13..Set 8-in. 1,590 ft.
H. W. Perritt's No. 4 Bowman-Hicks, SE cor. SE NE, Sec. 2-7-12 .....Dry and abnd. 2,580 ft.
A. H. Thames' No. 1 Edward est., 150 ft. NW SE cor. NE SE, Sec. 8-8-13 .....S.D. for wtr. 1,200 ft.

TENSAS PARISH

A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12 .....S.D. 3,545 ft.

UNION PARISH

Dan Brooks' No. 1 Odus Douglas, 330 ft. S and E, NW cor. NE SW, Sec. 9-22-2 .....Began Aug. 16, 12-in. at 170 ft.; drlg. 1,080 ft.
T. P. Fields, tr.'s No. 1 Summitt Land Co., C W½ NW, Sec. 1-21-1w .....S.W.; abd. 3,056 ft.

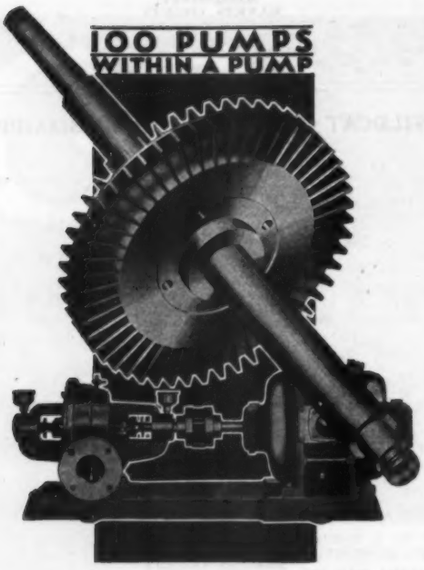
WINN PARISH

Gulf Ref. Co.'s No. 1-A Bodcaw Lbr. Co., 911 ft. N, 970 ft. E, SW cor., Sec. 4-10-5w .....Dry and abd. 4,270 ft.

ARKANSAS

CHICOT COUNTY

R. R. Smith's No. 1 Lytle, 660 ft. N, 660 ft. E, C, Sec. 21-25-3 .....T.A. 2,925 ft.



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Representatives in 50 principal cities.

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COLUMBIA COUNTY

Kendall Oil Co.'s No. 1 Fullenweider, Rhea & Kitchen, Sec. 13-17-22 ..... S.D. 804 ft.

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C, NW SE, Sec. 4-20-3 ..... S.D. 1,252 ft.

CLEVELAND COUNTY

Crum & Stillwell's No. 1 E. R. Bell, Sec. 10-10s-12w .... Rigging up.

CLEBURNE COUNTY
(Cable tools)

Donnelly-Craver et al's No. 1 Donophan Lbr. Co., SE cor. NW, Sec. 33-11-9 ..... S.D. 3,740 ft.

DALLAS COUNTY

E. C. Brewer's No. 1 W. E. Hillman, 330 ft. E, 40 ft. S, NW cor. SE NE, Sec. 20-10-13 ..... S.D.; W.O. 2,869 ft.

J. H. James, tr.'s No. 1 Fordyce Lbr. Co., 200 ft. S, 200 ft. E, NW cor. NE, Sec. 11-9-15 ..... S.D. funds 2,520 ft.

Zepp O. & G. Co.'s No. 2 Hillman, 450 ft. E, 340 ft. S, NW cor. SE NE, Sec. 10-20-13 ..... Began Aug. 12; 10-in. at 135 ft.; drlg. 200 ft.

DREW COUNTY

Co-Operative Dev. Co.'s No. 1 R. L. Hardy, SW cor. NE NE, Sec. 6-13-7 ..... Drlg. 1,300 ft.

HOT SPRINGS COUNTY

Star Oil Co.'s No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16 ..... S.D. 1,300 ft.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 220 ft. W, NE cor. NE SW, Sec. 5-5-7 ..... Drlg. 2,800 ft.

LITTLE RIVER COUNTY

Roberts Oil Co.'s No. 1 H. J. Russell, 330 ft. E, 330 ft. S, NW cor., Sec. 25-12-29 ..... Location.

LOGAN COUNTY

J. H. Flowers' No. 1 J. H. White, Sec. 13-6-26 ..... S.D.; W.O. 3,570 ft.

MILLER COUNTY

W. E. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor., Sec. 11-20-27 ..... Drlg. 1,955 ft.

OUACHITA COUNTY

Bolin & McLeon's No. 1 L. D. Nealy, 150 ft. S, 150 ft. W, NE cor. SE SW, Sec. 25-16-15 ..... S.D. 2,036 ft.

PIKE COUNTY

E. R. Henderson's No. 1 Tilyou, 660 ft. W, 500 ft. S, NE cor. NE SE, Sec. 26-8-14 ..... T.A. 2,909 ft.

J. E. Grandstaff et al's No. 1 Buford, Sec. 11-5n-1e, 2,210 ft. E and 800 ft. N of SW cor. Sec. ..... Location.

E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 31-8-24 ..... S.D.; W.O. 1,020 ft.

SCOTT COUNTY

Heavener O. & G. Co.'s No. 1 Riser, Sec. 36-4-26 ..... S.D.; T.D. 1,436 ft.

Waldron O. & G. Co.'s No. 1 White, NE cor. SW NW, Sec. 17-3n-29 ..... S.D; waiting on csg. 1,860 ft.

SEBASTIAN COUNTY

Ozark Nat. Gas Co.'s No. 1 E. O. Girard, C NW NW, Sec. 34-8-30 ..... Reaming 2,132 ft.

UNION COUNTY

Chapman & Wilson's No. 1 A. H. Hadley, 330 ft. N, 330 ft. E, SW cor. NE SW, Sec. 3-18-13 ..... 600 ft. fluid 30% S.W. in hole; T.A. 3,570 ft.

WASHINGTON COUNTY
(Cable tools)

C. H. Willoughby's No. 1 Jones, Sec. 24-16-30 ..... S.D. for funds 1,795 ft.

YELL COUNTY
(Cable tools)

Tegmeier & Luckett's No. 1 Falcon, Sec. 36-7-21 ..... S.D. 5,710 ft.

EAST TEXAS
BOWIE COUNTY

Hindeman & Ball's No. 1 Merritt (was Maud-Redwater Oil Co.'s), 175 ft. N, 175 ft. E, SE cor. G. W. Hardidge 100-ac. tr. on Floyd Merrit tr. in Y. S. McKinney Sur. ..... S.D. 2,520 ft.

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 2,500 ft. W, NE cor. Chas. Lewis Sur. ..... Rigging up.

Tarkington & Jones' No. 1 W. W. Whybark, 200 ft. S, 200 ft. W, SW cor. J. H. Dyer Sur. ..... S.D. 30 ft.

Lee Timberlake et al's No. 2 Tidwell, 2,510 ft. N, 655 ft. W, SE cor. T. M. Rice Sur. ..... S.D. 3,000 ft.

CAMP COUNTY

McDonald Bros.' No. 1 Tillery, 150 ft. E, 450 ft. S, NW cor. 127-ac. tr. in J. H. Murphy Sur. ..... S.D. 3,600 ft.

CASS COUNTY

E. K. Atkinson's No. 1 T. J. Wilson, 1,088 ft. S of N line, 2,376 ft. E of W line of H.R.S., J. R. McFarland Sur. ..... S.D. 3,021 ft.

Davis & Piggs' No. 1 Roy Brian, SW cor. Roy Bryan 88-ac. tr., Albert H. Latimer Sur. ..... S.D. 2,055 ft.

Everets Drlg. Co.'s No. 1 H. W. Whittington, 200 ft. S, and W, NE cor. 69-ac. Whittington tr., L. Strong Sur. ..... S.D. 3,922 ft; waiting on D.S.

Geo. McKamie's No. 1 R. E. Hall, 150 ft. N, 150 ft. W, SE cor. Hall's 117-ac. tr., H. Buckler Sur. ..... S.D; W.O. 4,080 ft.

C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.

John Nelson's No. 1 T. A. Irvin, 200 ft. S and E, NW cor. McNary Harris Sur. ..... S.D. 3,615 ft.

Olds & Smith's No. 1 Atheny, 3,056 ft. W-E line, 856 ft. S-N line, J. C. Byers Sur. ..... S.D. 3,100 ft.

John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 879 ft. W, SE cor. Lanier 86 ac. in K. E. Welborn Sur. .... Reaming to bottom 2,280 ft.

John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,106 ft. E, NW cor., Wm. Davis Sur. ..... S.D. 955 ft.

United North & South Co.'s No. 1-A Nickelberry, W. A. Irvin Sur., 300 ft. S and E, NW cor. Nickelberry 50-ac. tr. ..... Location.

HARRISON COUNTY

Gholson et al's No. 1 Bivins Farm Co., on J. K. Bivins, Jr.'s 320-ac. tr., Thos. Toby Sur. ..... S.D. 2,759 ft.

Lloyd Oil Corp.'s No. 1 E. S. Timmons, 150 ft. from N line to 250 ft. from E line of 105-ac. tr., Findley Sur. ..... Set 10-in. 240 ft; S.D; W.O.

O. O. Olford et al's No. 1 R. W. Bolding, 330 ft. E of SE cor. of J. B. Cullen's 161-ac. tr., 300 ft. N of N line of Mrs. C. L. Brown's 20-ac. tr., W. W. O. Stanfield Sur. ..... S.D. 2,702 ft.

O. H. Parkening's No. 1 T. J. Taylor, C. Blk. 32, W. H. Paype Sur. ..... S.D. 2,530 ft.

Ryan Consolidated Pet. Corp.'s No. 1 Dr. H. H. Key, 1,500 varas N of SE line, 500 varas E of SW line, of E. Carroll Sur. ..... Drlg. 5,758 ft.

Ryan Consolidated Pet. Corp.'s No. 1 J. M. Furh, 1,300 ft. N of NW cor. T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur. .... Derrick.

Thomas & Kinsey's No. 1 J. R. Watson, Thos. Iden Sur. Rigging up.

MARION COUNTY

Gist, Claunch & Dodson's No. 1 Miller, 1,470 ft. E line, 725 ft. N line, SW cor. H. Fulgran H.R. Sur. ..... S.D. 300 ft.

Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 3,555 ft. E most easterly W line, Alexander Albright Sur. ..... S.D. 2,380 ft.

Hindeman & Rhondo's No. 1 McGaughey, 1,547 ft. W most northerly SW cor., 1,638 ft. N most northerly S line, W. J. Willis Sur. ..... S.D. 3,910 ft.

PANOLA COUNTY

Hoffer et al's No. 1 Cameron Lbr. Co., center 1,306-ac. tr. in W. M. A. LaGrove Sur. ..... Derrick.

Moses & Wallace's No. 1 Daniel, 660 ft. N and W lines, Mrs. Gerrell 160-ac. tr., SW cor. Isabel Hanks Sur. Spudded and S.D.

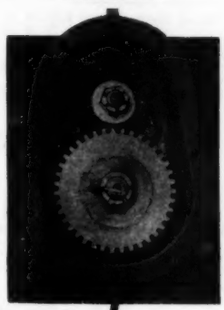
G. A. Davidson's No. 1 Latham, Wm. Rich Sur. ..... S.D; changing to heavy rig 550 ft.

J. L. Nelson et al's No. 1 J. W. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr. in Jas. Hanks Sur. ..... S.D. 1,500 ft.; laying water line.

Operating Dollars LAST LONGER with these Unit Pumping Powers

COMBINED in the new OP-300 series of unit pumping powers are operating features of real cost-saving value—motor, control and reduction gears built into a single, self-lubricated unit with fewer parts . . . adaptability of power, speed and stroke lengths to exact requirements of different wells . . . total absence of slippage . . . freedom from misalignment of moving parts . . . automatic restarting after power outage . . . full overload protection . . . extensive use of ball and roller bearings . . . rotating counterbalance adjustable to any desired degree of lead or lag . . . durable, all-metal construction with no parts that get out of order or wear rapidly.

Nearly 30 different pumping speeds can be obtained with each unit by the "change gear" feature shown here and by using motors of different speeds.



These advantages are practical assurance of savings in power and upkeep expense—savings that can be realized over a pumping range of 5 to 40 hp., with speeds of 10 to 30 strokes per minute and stroke lengths of 12 to 72 inches.

Inquire at the nearest Oil Well Supply Company store or Westinghouse Sales Office for more details about this new line that will make your operating dollars last longer.

New "Oilwell" rotating counterbalance, adjustable to any degree of lead or lag, is shown below with weights and pockets uncovered.

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RED RIVER COUNTY

D. M. Buffington's No. 1 Hossler, E. Hughhart Sur. ..S.D. 2,795 ft.
Johnson Pet. Co.'s No. 2 Randolph, Edw. Dean Sur. ..S.D. 2,280 ft.

SHELBY COUNTY

I. M. Bradley's No. 1 Ashberry (no check), G. W. Mitchell Sur. ..... S.D. 3,280 ft.
E. L. Chapman's No. 1 Pickering Lbr. Co., C. E. Henry (headright) ..... Arrng. to set 4½-in. csg. at 3,864 ft.
Chapperell Oil Co.'s No. 2 Holt, Matthew Moore Sur. ..S.D. 3,137 ft.
K. H. Francis' No. 1 John Mims, Mary Smith Sur. .... Reaming at 2,200 ft.
H. P. Glidden's No. 1 Pickering Lbr. Co., Jonas Harrison Sur., 300 ft. E of NW cor., 150 ft. S of N line at right angles Pickering 59-ac. tr. ..... S.D., W.O. at 3,854 ft.
H. H. Gracey's No. 1 J. A. Morrison, 1,500 ft. N, 300 ft. E, SW cor. J. A. Morris' 109-ac. tr., Wm. English Sur. ..... S.D. 2,600 ft; drlg. wtr. well.
T. A. Martin's No. 1 J. B. Bush, S 8 degrees E, 2,000 ft. from NW cor. J. B. Bush's 77-ac. tr., thence E at right angles to said line 200 ft., Alfred Lindsey Sur. ..... Derrick.
Henry Maulding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 80-ac. tr., A. D. Fountain Sur. ..... Drlg. at 3,000 ft.
Geo. N. Pace's No. 1 E. H. Powers, western J. Timms Sur., 150 ft. E of W line, 200 ft. N of S line Powers 126-ac. tr. ..... Derrick.
Ridgeway et al's No. 1 Polley, Domingo Gonzales Sur., 3,180 ft. E of SW cor., 160 ft. N at right angles of Polley 457-ac. tr. ..... Rigging up.
Schultz et al's No. 1 Hughes, 150 ft. SW cor. Hughes' 110-ac. tr., J. Clay Sur. ..... S.D. in shale 4,155 ft.
Sloan Prospecting Co.'s No. 1 Sanford, approximately 300 ft. N and 200 ft. E, SW cor. B. Sanford 49-ac. tr. in M. M. Van Sur. ..... Dry and abnd. 3,792 ft.
A. D. Smith's No. 1 Y. D. Carroll-J. A. Parker Sur., 1,500 ft. N, 300 ft. W, SE cor. J. A. Carroll Sur. .... Drlg. 2,500 ft.
C. H. Tautenhahn's No. 1 J. C. Bogard, 300 ft. E, 900 ft. E, NW cor. J. C. Bogard's 52-ac. tr., Thomas Baker Sur. ..... S.D. 20 ft; waiting on D.S.
Tenant et al's No. 1 J. Henry, C. Z. Walker Sur. ..... Drlg. 3,150 ft.

GULF COAST FIELDS AND WILDCATS

(Continued from Page 40)

Sun Oil Co.'s No. 1 Anna Higgins, Wm. Bloodgood Sur., 230 ft. from E line and 31 ft. from S line 10-acre tract ..... Drlg. shale 4,958 ft.
Sun Oil Co.'s No. 2 Winfree, W. D. Smith Sur., 50 ft. E of SW line and 150 ft. N of S line of tract ..... T. D. 3,621 ft.; reaming.
The Texas Company's No. 2 Winfree, west flank, W. D. Smith Sur., 264 ft. N. 50 ft. W at right angles out of SE cor. of lease ..... Set screen 5,611 ft.; swabbing fluid showing 98% water and 2% oil.
The Texas Company's No. 7 Wilburn, Henry Griffith League, 116 ft. S of Humphreys Corp.'s No. 8-H Kirby ..... Derrick.

HUMBLE—HARRIS COUNTY

The Texas Company's No. 25 House (D.D.), M. Owen Sur.. T. D. 5,008 ft.; pumping fresh water.

PORT NECHES—ORANGE COUNTY

The Texas Company's No. 1 Polk-Kuhn-Glass, 260 ft. E and 1,545 ft. S of SW cor. Marshall Beaucham Sur., in the T. J. Notgrass Sur. ..... T. D. 98 ft.; cmtd. 15½-in. surface csg. 52 ft.
The Texas Company's No. 2 Kuhn, 587 ft. S and 150 ft. W of NE cor. of the Mary E. Hall Sur. No. 2 ... Location.

MARKHAM—MATAGORDA COUNTY

Ike Laughlin et al's No. 1 W. H. Gray, 400 ft. from S line, 150 ft. E line, Blk. 3, Wm. Hadden Sur. ..... Oil sand 3,245-57 ft.; 6⅝-in. csg. at 3,245 ft.; drilled plug to test.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 22 Cade, N. Fitzsimmons Sur., 125 ft. S of No. 21 ..... Set 10-in. csg. 1,266 ft.

HULL—LIBERTY COUNTY

J. F. Bachara's No. 2 Fee (D.D.) ..... Comp. flowing 800 bbls., sand 4,452 ft.
The Texas Company's No. 2 Barrow (W.O.), Jesse Devore Sur., 276 ft. W and 50 ft. S of NE cor. Barrow tract ..... T.D. 3,866 ft; sidetracked 3,702-60 ft.; coring sand and shale showing oil 3,928 ft.

DAMON MOUND—BRAZORIA COUNTY

Layne et al's No. 8 Wisdom, 156 ft. from NW line and 150 ft. from NE line, Lot 52, Blk. D, Wisdom Subd., A. Darst Sur. ..... No report; previously reported depth 1,811 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Oil Co.'s No. 1 Davis (D.D.), 50 ft. out of SE cor. of David Kokernot Sur. ..... Sand 3,564-82 ft.; set 22 ft. of 6⅝-in. screen; comp. pumping 400 bbls. daily.

ORANGE—ORANGE COUNTY

Jefferson Prod. Co.'s No. 1 Bland ..... Sandy shale 2,980 ft; drill stem stuck.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 14 Boyt, H.&T.C. Sur. No. 22, 500 ft. N of No. 10 ..... T. D. 6,005 ft.; plugged to sand 3,961-78 ft.; set 41 ft. of 7-in. screen; tested salt water; to perforate higher.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 6 Lost Lake, 2,381 ft. W and 289 ft. S of No. 5 in Lost Lake ..... Location; dredging channel to location.

NASH—FORT BEND COUNTY

Harrison & Abercrombie's No. 15 Nash, Thomas Alsbury S League, 450 ft. E and 75 ft. S of Rycade Oil Corp.'s No. 13 Nash ..... Spudded.

MOSS BLUFF—LIBERTY AND CHAMBERS COUNTIES

Humble Oil & Ref. Co.'s No. 8 Sterling, James McFaddin Sur., 150 ft. from N line and 1,650 ft. from E line of 512-acre tract ..... Cmtd. 13⅜-in. csg. 946 ft.

REFUGIO—REFUGIO COUNTY

Mission Drilling Co.'s No. 1 O'Brien (W.O.), SW cor. 1½-acre tract, Refugio Town Tract ..... Tested salt water sand 6,452-59 ft.
Moody-Seagraves Prod. Co.'s No. 4 O'Connor, Refugio Town Tract, 150 ft. from N line and 1,282 ft. from W line of 60-acre tract ..... T. D. 6,477 ft.; plugged to sand 6,435-45 ft.; standing.
Pearson Properties' No. 3 Ryals, 526 ft. from W line and 150 ft. from S line 52-acre tract, Refugio Town Tract ..... Sand showing oil 6,450-57 ft.; cmtd. 6⅝-in. csg. 6,446 ft.; drilled plug.
L. L. Smith's No. 1 L. M. Rogers (W.O.), C of Blk. 87, Refugio Townsite ..... T.D. 6,457 ft.; cmtd. 4½-in. csg. 5,300 ft; set whipstock.
United Prod. Corp.'s No. 6 O'Brien, 150 ft. from S line of tract, 350 ft. W of No. 3 ..... Oil sand 6,438-51 ft; twisted off joint drill stem; fishing.
United Prod. Corp.'s No. 4 M. F. Lambert, Wm. Hews and L. Brown Sur., 2,514.7 ft. NE along NW line from SE cor. lease and 330 ft. NW at right angles... T. D. 3,948 ft. in sticky shale; set 9-in. (O.D.) csg.

SOUTH LOUISIANA FIELDS

LOCKPORT—CALCASIEU PARISH

Vacuum Oil Co.'s No. 5-A Farquahar, 105 ft. S and 110 ft. E of NW cor. SW NE Sec. 8-10s-8w ..... Drill stem stuck 6,079 ft.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 10 Housierre-Latrielle, 5,435 ft. E and 1,070 ft. N of SW cor. Sec. 47-9s-2w ..... Drlg. hard sand 6,528 ft.

EDGERLY—CALCASIEU PARISH

Rex Petroleum Co.'s No. 3 Prairie Narroni, Sec. 21-9s-11w, 125 ft. from S line and 50 ft. from W line of tract ..... Coring sand 4,365 ft.

HACKBERRY—CAMERON PARISH

R. E. Seiss' No. 2 J. M. Vincent ..... T.D. in rock 2,402 ft; cmtd. 6⅝-in. csg. 2,004 ft.
J. G. Sutton's No. 2 Erwin, Sec. 13-12s-10w ..... Sand 2,980-89 ft.; 6⅝-in. csg. at 2,972 ft.; set 1 jt. 4½-in. screen; comp. flowing 1,200 bbls. daily, 800 to 1,000 lbs. pressure, ⅝-in. choke; corrected gravity 22.5°; temp. 87°.
The Texas Company's No. 8 State ..... Derrick.

VINTON—CALCASIEU PARISH

Vinton Pet. Co.'s No. 7 Matilda Gray (D.D.), 157 ft. N and 674 ft. W of SE cor. SW NE of Sec. 33-10s-12w.. Set 1 joint 3-in. screen 3,390 ft; bailed S.W.; S.D.

LOCKWOOD—FORT BEND COUNTY

Cullen & West and Gulf Prod. Co.'s No. 1-B Lockwood & Sharp, J. Rabb Sur., 300 ft. N and 300 ft. W of NW cor. George 300-acre tract ..... Set 27 ft. 4½-in. screen 3,543 ft., and 2½-in. tubing to top; comp. flowing 31 bbls. pipe line oil hourly, ½-in. choke, 24.4 gravity (cor.); temp. 80°.
Cullen & West and Gulf Prod. Co.'s No. 2-A Lockwood & Sharp, J. Rabb Sur., 600 ft. N 20° W of No. 1-A... Drlg. shale 2,865 ft.
Cullen & West and Gulf Prod. Co.'s No. 2 H. P. Lockwood, J. Rabb Sur., 300 ft. N and 900 ft. W out of SW cor. 383-acre tract ..... Rig.
Cullen & West and Gulf Prod. Co.'s No. 2 A. P. George, J. Rabb Sur., 300 ft. S and 905 ft. E out of NW cor. 200-acre tract ..... Location.

MISCELLANEOUS WILDCATS

TEXAS

BRAZORIA COUNTY

Cullen & West's No. 1 Nash, Thomas Alsbury Sur. No. 4, 2,600 ft. E and 1,240 ft. S of SW cor. Mrs. R. L. Young 1,483-acre tract ..... Drlg. sandy shale 4,893 ft.
The Texas Company's No. 1 Belcher, Manvel, 167 ft. SE of NW line and 223 ft. of NE of SW line, Lot 18, Blk. A, Suburban Gardens Subd. ..... Drlg. sand 5,279 ft.
United Oil Syndicate's No. 1 Levitt, 900 ft. from W line and 400 ft. from S line of John Peske Sur. ..... Drlg. gumbo 1,222 ft.

BURLESON COUNTY

Reynolds Oil Co.'s No. 1 Harris, 500 ft. from W line and 400 ft. from N line of J. M. McKean Sur. ..... S.D. 400 ft.
F. Marek & Son's No. 1 Marek, N. A. McFaddin Sur., 150 ft. from SE line and 500 ft. from SW line of 84.42-acre tract ..... Sand and shale 2,386 ft., dry and abd.
Marts et al's No. 1 W. H. Boyett, W. McWilliams Sur., 3,168 ft. N of N cor. of City National Bank 208-acre tract and 300 ft. SE of NW line of Boyett tract.. Washing to bottom 2,354 ft.
J. E. Stubblefield's No. 1 J. B. Mitchell, 81 ft. SW and 4,340 ft. SE of S cor. of Joseph Henson Sur., in A. T. Woolridge Sur. ..... Abd. 518 ft.

FORT BEND COUNTY

Stone & Wyman's No. 1 Beard, H.&T.C. Sur. No. 118, 1,150 ft. from NW line and 1,892 ft. from NE line.. Drlg. clay 182 ft.

GRIMES COUNTY

Rianjo Oil Co.'s No. 2 Cuthrell, Pat B. O'Connor Sur., C of 110-acre tract ..... Drlg. gumbo 610 ft.

HARDIN COUNTY

Plummer & McDaniel's No. 1 T. S. Reed, 2,500 ft. from W line and 500 ft. from N line of T.&N.O. Sur. No. 296 ..... Abd. in gumbo and lime 1,326 ft.
D. O. Speight's No. 1 Guedry, 4 miles S of Baton ..... Drlg. sand and shale 4,324 ft.

HARRIS COUNTY

Hattie Baldwin's No. 1 Krahn, 250 ft. out of NW cor. L. Finn Sur. ..... Abd. 492 ft.
Givens & Daybault's No. 1 Lobit, David Middleton Sur., Blk. 19, Lobit Subd. ..... Drlg. shale 1,508 ft.
Humble Oil & Ref. Co.'s No. 5 Minnetex, Mykawa, 150 ft. from S line and 200 ft. from W line, Lot 261, Wm. Lovett Sur. ..... Location.
J. P. Hunnicutt's No. 1 Haney, T. Pitching Sur., 150 ft. out of NE cor. of Geo. E. Haney 730-acre tract ..... Location.
Louisiana Oil & Dev. Co.'s No. 1 J. W. Wilson, W. Ritchie Sur. ..... Location.
Shubert & Alexander's No. 1 Herman Hale, 1,058 varas E of NW cor. R. A. Hanks Sur., thence 790 varas S and thence 70 varas W 74° ..... Derrick.

JACKSON COUNTY

Chicago Gulf Co.'s No. 1 Rogers, SE cor. of Blk. 14, N. Rodriguez Sur. ..... T.D. 3,952 ft; cmtd. 6⅝-in. csg. 3,945 ft.
Chicago-Gulf Oil Co.'s No. 9 Drushell, Edna F. Rodriguez Sur., 1,080 ft. N. 58° E No. 8 ..... Derrick.
Francitas Oil & Land Co.'s No. 1 Thrull, 3,260 ft. SW of N cor., P. Green Sur., 540 ft. SE of E bank Caranchua Creek ..... Derrick.

LIBERTY COUNTY

J. R. Ingram's No. 1 C. T. Palmer, James Fenner Sur., 1,000 ft. from W line and 850 ft. from S line of tract.. Drlg. gumbo 2,281 ft.
Hamm et al's No. 1 Harvard, Davis Hill ..... Gumbo 1,015 ft; S.D.
Tucker et al's No. 1 Bell, H.&T.C. Sur. No. 4 ..... S.D. 2,970 ft.

ORANGE COUNTY

Altex Oil Co.'s (Veteran Oil Co.) No. 1 Reed, A. Nelson Sur. No. 1, 500 ft. from N line and 250 ft. from E line of tract ..... T.D. 4,603 ft; sidetracked 1,200-2,200 ft.; S.D.
Crew Oil Co.'s No. 1-A Mansfield, 50 ft. E of No. 1 .... Shale and gumbo 1,443 ft.

POLK COUNTY

Freeman et al's No. 2 Freeman ..... S.D. 3,124 ft.
T. B. Hoffer's No. 1 Saner-Ragly Lbr. Co., 300 ft. out of most northerly cor. of most easterly County School Land Abst. 271 ..... Derrick.
Sunshine Oil Co.'s No. 1 Olliver, A. Viesca Sur., 600 ft. NE along SE line from S or SW cor. of 50-acre tract and thence 200 ft. NW at right angles ..... Drlg. sandy shale 3,502 ft.
Trans-Coastal Oil Co.'s No. 1 M. E. Roberts, J. F. Rumayor Sur., 350 ft. from W line and 150 ft. from N line of tract ..... No report; previously reported depth 734 ft.

REFUGIO COUNTY

Blanco Creek Oil Co.'s No. 1 Damaan, 150 ft. from N line and 150 ft. from W line of Blk. 14, Bonnie View Ranch Subd. ..... Drlg. shale 4,561 ft.
Humble Oil & Ref. Co.'s No. 1 O'Connor, John Keating Sur., 6,012 ft. S from NE cor. along SE line of Lon T. Rios Sur., thence 7,375 ft. W at right angles in John Keating Sur. ..... T.D. 1,436 ft; cmtd. 13⅜-in. csg. 1,298 ft.

TYLER COUNTY

King Oil Co.'s No. 1 Caswell ..... Sand and shale showing oil 1,255 ft; cmtd. 6-in. csg. 1,218 ft.
Allied Pet. Co.'s (Texas Southern Pet. Co.) No. 3 Wilson, Mrs. E. Cherry Sur. No. 798, 1,500 varas from W line and 600 varas from N line ..... Drlg. shale 5,025 ft.

VICTORIA COUNTY

Houston Oil Co.'s No. 1 Conrad, T.&N.O. Sur. No. 1, 1,100 ft. from SW line and 100 ft. from NW line ....T. D. 5,003 ft.; drill stem stuck in heaving shale showing gas; cmtd. 8¼-in. csg. 4,740 ft. to protect hole while fishing.

The Texas Company's No. 3 McFaddin, S 15° W., 6,300 ft. and N 75° W 1,850 ft. out of NE cor. John M. Rine Sur. ....Drlg. sticky shale 3,702 ft.

United Prod. Corp.'s No. 5-A McFaddin, 4,250 ft. N along extended E line of C. L. Mann Sur., in Maria Traviesa Sur. ....Drlg. gumbo 1,865 ft.

WALLER COUNTY

McDaniel and associates' No. 1 Citizens State Bank, B.B.B.&C. Sur., C of 150-acre tract ....Rig.

WASHINGTON COUNTY

Penn-Tex Oil Co.'s No. 2 Kamas Brenham, S. M. Williams Sur. ....Shale 3,286 ft.; cmtd. 1,000 ft. of 8-in. pipe; drlg. plug.

WHARTON COUNTY

Bonds & Alexander's No. 1 Hahn, S.A.M.G. Sur., Sec. 13, 800 ft. W and 200 ft. N of SE cor. 152.1-ac. tract ....Drlg. sand rock 476 ft.

SOUTH LOUISIANA

CALCASIEU PARISH

Crawford Doyle's No. 1 Johnson, Sec. 23-9s-13w ....S.D. 875 ft.
I. O. Davis' No. 1 Industrial, Sec. 29-9s-10w ....Standing 6,568 ft.
Wilfred Lahay's No. 1 Jardell, Sec. 16-10s-12w ....Drlg. sticky shale 3,639 ft.
Success Oil Co.'s No. 1 Hewitt, 90 ft. out of SW cor., Sec. 11-9s-11w ....Rig.
Vacuum Oil Co.'s No. 1 Wait (D.D.), 225 ft. out of SE cor. Sec. 12-9s-7w ....Sand showing oil 6,961-79 ft; cutting out 7-in. csg. to reset.

CAMERON PARISH

Vacuum Oil Co.'s No. 2 Cameron Meadows, 3,120 ft. S and 1,900 ft. W from NE cor. Sec. 21-14s-9w (500-ft. S No. 1) ....T. D. 4,312 ft.; drlg. hard sand in sidetracked hole 4,181 ft.

The Texas Company's No. 7 State, Calcasieu Lake ....Location.

IBERIA PARISH

Jefferson Lake Oil Co.'s No. 21 Lake Peigneur, Sec. 58-12s-5e, 300 ft. NW of No. 20 ....Cap rock 529-668 ft.; showing sulphur; standing.

IBERVILLE PARISH

Standard Oil Co.'s No. 1 Myrtle Grove-Wilbert, Bayou Choctaw, Sec. 52-9s-11e, 250 ft. W No. 1 Gray....Drlg. 1,000 ft.
Standard Oil Co.'s No. 7 Wilbert, Bayou Blue ....Derrick.
Standard Oil Co.'s No. 6 Schwing, Bayou Blue, Sec. 73-9s-11e, 317 ft. S of No. 2 ....Fishing 4,075 ft.
Standard Oil Co.'s No. 7 Schwing, Bayou Blue, Sec. 74-9s-10w, N 45°, W 1,800 ft. from No. 5 ....T.D. 1,350 ft; sand showing oil 1,307-12 ft; S.D. pending completion of No. 6.

PLAQUEMINES PARISH

Humble Oil & Ref. Co.'s No. 2 State, Lake Grand Ecaille, Sec. 14-20s-26e ....Cmtd. cavity 1,339 ft.

TERREBONNE PARISH

The Texas Company's No. 1 La.L.&E., Bay St. Elaine ....T. D. 5,700 ft.; drill stem stuck; trying to set whipstock 4,800 ft.
The Texas Company's No. 3 La.L.&E., Bay Junop ....Location.
The Texas Company's No. 4 La.L.&E., Bay Junop ....Location.
The Texas Company's No. 10 State, Lake Barre ....Location.
The Texas Company's No. 11 State, Lake Barre ....Derrick.
The Texas Company's No. 12 State, Lake Barre ....Location.
The Texas Company's No. 14 State, Lake Barre ....Location.
The Texas Company's No. 6 State-Lake Pelto (D.D.), 1,550 ft. N and 670 ft. W from SE cor. tract, Sec. 8-22s-18e ....Cap rock 1,843 ft.; cmtd. 9⅝-in. csg. 1,776 ft.

VERMILLION PARISH

Pure Oil Co.'s No. 1 Alliance Land, Sec. 34-11s-1w, 2,600 ft. N and 300 ft. E of SW cor. section ....Drlg. hard sandy lime 6,267 ft.
Pure Oil Co.'s No. 2 Southwest Louisiana Land Co., 1,300 ft. E and 300 ft. S of NW cor. Sec. 4-12s-1w ....Rig.

WEST FELICIANA PARISH

Putnam Syndicate's No. 2 Como Plantation, Sec. 51-1s-4w. Shale and lime 2,050 ft; waiting on 8¼-in. csg.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 39)

Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio ....T. D. 865 ft.; underreaming csg.

CALDWELL COUNTY

Ralph R. Lewis' No. 1 Keith McGee, 600 ft. from E and S lines of tract in J. Pinchback Sur....Spudded in.
Mills et al's No. 1 McMahon, 275 ft. SW line, 75 ft. SE line of tract, J. Pinchback Sur....T. D. 2,502 ft.; standing.

COMAL COUNTY

Caldwell & Lanier's No. 1 T. J. Byler, 175 varas from W line, 370 varas from N line of 320-ac tract in the H.E.&W.T. No. 5,894 Sur....T. D. 722 ft.; trying to set csg. on bottom.

DEWITT COUNTY

Gibson & Sturm's No. 1 Clark, Dolores Alderete Sur....Rigged up; standing.

DUVAL COUNTY

Camp and Southern Crude's No. 2 Hubbard, 990 ft. from N line, 330 ft. from W line of B.S.&F. Sur. No. 73 ....Rigging up.
Coffee et al's No. 1 Jose Garza, center Sur. 49....T. D. 1,780 ft.; drlg.
L. E. Lockhart's No. 1 Sutherland, 330 ft. from N and W lines of Sur. 511....T. D. 500 ft.; drlg.
S. J. Carpenter et al's No. 1 Juan Benavides, Blk. 33, Mesquite grant ....T. D. 1,712 ft.; standing.
Frank Gravis' No. 1 Shallert, Sur No. 285....Derrick.
South Texas Production Co.'s No. 1 Benavides....Making location.

FAYETTE COUNTY

Elam & Reynolds' No. 1 Florence, M. Muldoon Sur. No. 13 ....T. D. 2,610 ft.; flowing fresh wtr.

FRIO COUNTY

Wray & Dunbar's No. 2 Mrs. Burns, northeastern Frio County ....Making location.

GUADALUPE COUNTY

Camp et al's No. 1 Sue Denman, 450 ft. N of highway, 150 ft. from E line of tract in William Arrington Sur. ....T. D. 2,507 ft.; in Edwards; tested oil; set csg.

Harry Bruner's No. 1 Jim Sherrill, 330 ft. from NW and SW lines of tract in George Allen League....T. D. 180 ft.; standing.
McGarrity et al's No. 1 A. Wesch, Jr., 150 ft. to N and E lines of farm, H. M. Thompson Sur....T. D. 1,200 ft.; drlg.
Schleyer, Atherton and Armstrong's No 1 Ogletree, Robert Smith Sur. ....T. D. 1,745 ft.; shut down.
Linne et al's No. 1 J. E. Linne, center 263-ac. tract in V. Cortario Sur. ....T. D. 1,435 ft.; drlg
W. J. Walton's No. 1 Zoborcski, 700 ft. W line of tract, 500 ft. S of Guadalupe River, in Joseph D. Clements Sur. ....T. D. 2,210 ft.; flowing 8 bbls. daily.

HAYS COUNTY

J. C. Jones et al's No. 1 Byder, John Ingram Sur....T. D. 930 ft.; standing.

JIM WELLS COUNTY

Carsil Oil & Gas Co.'s No. 3 McGill, 450 ft. S, 300 ft. E of No. 1 McGill in Wm. D. Baldwin Sur....T. D. 2,804 ft.; shot with 20 qts.; estimated 7,000,000 ft. gas, 400 lbs. pressure.

KARNES COUNTY

V. F. Neuhaus' No. 1 Russell, 150 ft. from E line of tract, 150 ft N of highway, Carlos Martinez Sur....Rigging up.

KENDALL COUNTY

Borgett et al's No. 1 W. Haag, 3,804 ft. from N line, 1,506 ft. from W line of W. Avery Sur....T. D. 1,220 ft.; drlg.
Dixon Oil Co.'s No. 1 Ottmar Behr, 823 ft. from S and N lines of Jessie Wilson Sur., 3 miles S of Sisterdale ....T. D. 2,674 ft.; drlg.
Sitton et al's No. 1 Garvin, C of NE of D. L. Richardson Sur., in the D. L. Richardson Sur., 1 mile NE from Kendalia ....T. D. 1,482 ft.; shut down.
Fred S. Dibble's No. 1 Ellebrach, Sur. 77, N part of County ....T. D. 50 ft.; shut down.
Sartain's No. 1 Lawhon, 30 ft. SE of Perkins' No. 1 Lawhon; taken over at 281 ft....T. D. 575 ft.; no report.

KERR COUNTY

Herbert Oil Co.'s No. 1 J. D. Witt, 1,320 ft. N line, 1,320 ft. W line of Sec. 1,922, W. H. Hamilton Sur....T. D. 200 ft.; standing.
Evans & Gant's No. 1 Selker-Mears, C.C.S.D.&N G.R.G. Sur. No. 1,605 ....T. D. 4,031 ft.; shut down.
Evans & Gant's No. 1 E. Young, A. E. Burge Sur. No. 28 ....T. D. 1,312 ft.; standing.
Evans & Gant's No. 1 Love in J. Martinez Sur. No. 1,594, 1,320 ft. from W line of survey and 660 ft. S of S line of Sur. No 1,597....T. D. 4,060 ft.; shut down
Evans & Gant's No. 2 Love, 150 ft. S and W line of Sur. 1,593 ....T. D. 450 ft.; fishing.

LIVE OAK COUNTY

Catlett & O'Neil's No. 1 Hatcher, 253 ft. from S line, 3,200 ft. from W line of 703-ac. tract in James McGloin Sur. ....T. D. 5,804 ft.; abnd., dry.
Henderson Coquat's No 1 Hewitt ....T. D. 400 ft.; standing.

LEE COUNTY

Burt et al's No. 1 R. C. Saunders, J. Maxmillan Sur....T. D. 4,034 ft.; shut down.
A. H. Wheeler and associates' No. 1 fee, Blk. 47, H. Donohue Sur. ....T. D. 3,360 ft.; drlg.
C. B. Polk et al's No. 1 Stoltz, Hiram Donohue Sur....T. D 2,300 ft.; shut down.

MAVERICK COUNTY

I. N. Boicourt's No. 1 Bandera School Land....T. D. 2,162 ft.; drlg.

McMULLEN COUNTY

A. E. Adams' No. 1 Martin, 150 ft. NW line, 150 ft. to SW line of E. Melon No. 212 Sur....T. D. 75 ft.; drlg.; previously carried as Belt Petroleum, Inc.
Whall, Scherer et al's No. 1 Shiner, Henry Brewer Sur...T. D. 2,008 ft; shut down.

MEDINA COUNTY

Frank A. Brown's No. 1 Fohn, 150 ft. from E line, 790 ft. from N line of J. F. Torry Sur. No. 113....Rigging up.
O. H. Pretelliers' No. 1 J. F. Riley, 450 ft. from N and 750 ft. from E line of tract in Sur. No. 449....T. D. 130 ft.; shut down.
Genard Bros.' No. 1 L. Crawford, 150 ft. to N and W lines of tract in J. Keppler Sur. No. 478....T D. 830 ft.; drlg.
J. H. Hickey's No. 1 Jungman, at N end Chicon Lake....T. D. 650 ft.; shut down.
Star Pet. Co.'s No. 1 Medina Valley Irrigation Co., 150 ft. from S and E lines of Isom Palmer Sur. No. 20...T. D. 760 ft.; drlg.
Sunflower Oil Co's No. 1 Mofield, J. Brothag Sur. No. 532 ....T. D. 2,100 ft.; plugged back to 1,800 ft.; swabbing 5 bbls. oil.
Yancey Dev. Co.'s No. 1 Fassler, Sur. No. 801....T. D. 1,945 ft.; reaming to set csg.

MILAM COUNTY

Dil-Tex Oil Corp.'s No. 1 Dilbeck, 450 ft. N and E lines of farm, Fernando Rodriguez Sur....T. D. 2,500 ft ; shut down.
H. W. Elliott's No. 1 Marek, 767 ft. from N line, 500 ft. from W line of 160-ac. tract, in B. Wickson Sur....Spudded in.
Nowlen's No. 1 Beard, 1,350 ft. from SE line, 450 ft from SW line of farm, in J. F. Guthrie Sur., 4 miles S Thorndale ....Rigging up.
Red Bank Oil Co.'s No. 1 Foster, A. G. Berry Sur....T. D. 4,458 ft.; drlg.
Wilson-Broach Co.'s No. 1 E. L. White, 250 ft. from S and E lines of S. Frost Sur....T. D. 2,690 ft. in Edwards; shut down.

NUECES COUNTY

Southern Crude Oil Pur. Co.'s No. 1 Chas. E. Stratton, 1,650 ft. E line, 330 ft. S line of P. Sancho Sur....T. D. 4,487 ft.; drlg.

REAL COUNTY

McGinley Corp.'s No. 1 Haby, C of SW, Sec. 175....T. D. 2,500 ft.; hauling in csg.

SAN PATRICIO COUNTY

Jacob, Buzzini, Pickett's No. 2 Baldwin, three-fourths mile from S and W lines of tract....T. D. 2,066 ft.; drlg. sand.

STARR COUNTY

Hooks & Weaver's No. 1 Kelsey-Bass, in Blk. 6, Porcion 76 ....T. D. 280 ft.; drlg.

TRAVIS COUNTY

C. R. Franklin et al's No. 1 J. Wilson, 160 ft. from N and W lines of farm in A. Alexander Sur....Rigging up.
Fritz Fuchs' No 1 L. Ballerstedt, 450 ft. from N line, 750 ft. from E line of tract in Amos Alexander Sur. ....T. D. 1,105 ft.; shut down.
Fritz Fuchs' No. 1 A. F. Smith, 150 ft. from W line, 750 ft. from N line of tract in D. Kimbor Sur....Location.
Ray & Henze's No. 1 Hatech, in C of tract in S. Hamilton Sur. ....Spudded in and shut down.
Waldron et al's No. 1 T. Cook, 900 ft. from NW line, 3,500 ft. from SW line of D. H. Minor Sur ....T. D. 740 ft.; drlg.

WEBB COUNTY

Cole Pet. Co.'s No. 4 Benavides, Sur. No. 1,613....T. D. 3,225 ft.; drlg.
Eugene Garner, Jr.'s No. 1 Billings, 411 ft. E line, 956 ft. N line of NW NE, Sur. 71....Building derrick.
Southern Gas Utilities and O. W. Killam's No. 1 de la Garza ....T D. 2,250 ft.; drlg. deeper.

WILLIAMSON COUNTY

Citizens Oil Development Co.'s No. 2 Forewood, 1,200 ft. to NE line, 1,420 ft. to SE line of farm and survey in A. S. Fisher Sur....T. D. 1,318 ft.; drlg.
Hays & Gee's No. 1 E. G. Johnson, 1,800 ft. from N line, 170 ft. from E line of tract in B. C. Low Sur., S of Georgetown ....T. D. 1,200 ft.; drlg.
H. Fritz et al's No. 1 fee, 450 ft. from S line, 1,050 ft. from W line of farm in H.T.&B. Sur....T. D. 893 ft.; drlg.
McLean's No. 1 R. C. Miller, 300 ft. from S line, 150 ft from W line of farm in Manlove Sur....T. D. 1,900 ft.; reinstated; cleaning out to deepen.
R. S. Wilson's No. 1 Speckels, 150 ft. N of road, 600 ft. from W line of farm in J. Jordan Sur., 1 mile N of Coupland ....Rigging up.

WILSON COUNTY

A. M. Blume's No. 1 Nickolson, C. Diaz Sur....T. D. 1,066 ft.; shut down
Sun Oil Co.-Penn Oil Co.'s No. 1 Tudyke....Core test.

ZAPATA COUNTY

O. W. Killam's No. 1 A. M. Bruni, 2,610 ft from NE line and 3,850 ft. from SE line of 2,561-ac. tract in Borrego grant ....500 ft.; drlg.
McCaldin, Owen & Newton's No. 1 F. Guerra, in Sur. 161..500 ft.; drlg.
H. L. Sargent's No. 1 Gutierrez, 922 ft. from W line, 472 ft. from S line of Blk. 5, Porcion 10, in Borrego grant ....Rigging up.
C. J. Webster Oil & Gas Co.'s No. 1 Benavides....T. D. 2,020 ft.; abnd., dry.
T. H. Ward's No. 1 Uribe, 150 ft. NW line, 150 ft. SW line, Blk. 8 Subd., Share 7, Partition No. 6, T. Uribe Partition of Jose V. Borrego Sur....Rigged up and standing.
Bill Henry et al's No. 1 Gopher Trust estate, Borrego grant ....T. D. 1,365 ft.; standing.
Penny Prod. Co.'s No. 1 Juan V. Cuellar, Jr., et al, 175 ft. NE line, 175 ft. SE line, Poppas Subd., Porcions 33 and 34, Blk. 1, Sur.2....T. D. 2,035 ft.; drlg.
National Oil Co.'s No. 1 Zapata Trust estate, 617 ft. NW line, 96 ft NE line, Blk. 97, De Prom Subd., Porcion 6 ....T. D. 600 ft.; standing.
National Oil Co.'s No. 2 Adams, 150 ft. from NW line and SW line, Blk. 11, Borrego grant ....T. D. 1,320 ft.; standing.

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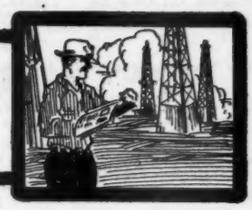
Read by Oil Men Everywhere



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Tulsa, Oklahoma

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IN MARKET for one mile 8" Used Line Pipe plain ends. Send full information and lowest cash price. Address Box E-556, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—EQUIPMENT

WANTED: A SMALL MOUNTED Diamond Core Drill. Will either buy or lease. J. Martin, 220 W. Elm Enid, Okla.

USED EQUIPMENT FOR SALE

Casing, Linepipe, Boilers, Engines, Compressors, Derricks, Tanks, Separators, Rig Irons, Pumps, Gasoline Plant Equipment, Fittings, Valves, Etc.
Low prices and quality merchandise.

USED EQUIPMENT COMPANY
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Phone 5-3263
TULSA, OKLAHOMA.

NEW LATEST Model 5-Ton White Truck, never used, with Mounted Braden Type B-15 Winch. Address Box E-553, The Oil and Gas Journal, Tulsa, Okla.

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About 2½ miles 8-inch O.D. 18-lb. plain end gas line complete with Dresser couplings. In service two years only. Like new. Cash price

28 Cents Per Foot

F.o.b. cars, Winfield, Kansas.

Wire, phone or write

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FOR SALE: Leeds Northrup Optical Pyrometer complete with telescope and control box. Instrument in perfect working order and will be sold for an attractive price. Write Box E-541, The Oil and Gas Journal, Tulsa, Okla.

EXTRA HEAVY 122' steel derrick, standard equipment, largest band wheel made, steel bull wheel, chain driven sand reel, best money can buy, drilled one 6,000' well; also 2,000' 11¾ extra heavy Class D seamless casing; also 2,000' 9" extra tensile and collapse strength casing; also Hinderliter casing clamps same size; also Braden steel engine and belt house for rig. Now located north of Electra, Wichita County, Texas. H. B. Dudley, 924 Hamilton Bldg., Wichita Falls, Texas.

FOR SALE—EQUIPMENT

FOR SALE for a low price. A gasoline powered Sullivan Diamond Core Drill. Write Box E-492, The Oil and Gas Journal, Tulsa, Okla.

NEW GAS-gasoline drilling engines 100 and 150 HP. Priced to sell. Write Box E-550, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—Slightly used Ingersoll-Rand steam two stage, 250-pound air compressor. Piston displacement. 312 cubic feet per minute at 200 r.p.m. Complete with intercooler and receiver. Write Box E-456, The Oil and Gas Journal, Tulsa, Okla.

200 Amp. Lincoln Arc Welder, 220/3/60. Practically new. Price $425.00. 100 Amp. Federal Butt Welder; 220 V. 60 cy. Complete. Excellent condition. $500.00. 12"x14" Chicago Pneumatic Air Compressor. $350.00. 46"x18' Niles Lathe, Quick change; $1,250.00. Also, large stock of lathes, shapers, mailing machines, pipe machines, bolt threaders; etc. Send for our list. Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West Second St., Cincinnati, O.

ONE MODEL 3168 Buckeye ditching machine in A-1 condition together with plenty of spare parts and one complete blacksmith outfit. Address F. H. Carson, 222 W. Dewey St., San Antonio, Tex.

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OIL located before drilling. Geophysical method. Toggodometer Instrument; take pay in oil. No oil, no pay, except traveling and testing expenses, 95 per cent accuracy. O. P. Coffin, Caddo, Tex.

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Want independent East Texas producer to join independent retail marketing organization in forming corporation to build new refinery in East Texas. This is splendid opportunity for some producer with insufficient crude outlet to secure permanent connection with legitimate firm and both can profit mutually. This is NOT a promotion scheme. Best Bank references. Address Box E-555, The Oil and Gas Journal, Tulsa, Okla.

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BUSINESS CORPORATIONS ORGANIZED. Delaware laws. Many advantages. Low cost. Write for Free forms. Dept. 16, Corporation Fiscal Co., Wilmington, Del.

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F. P. LYONS

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Accessible to pipe lines and loading racks, offered at prevailing market prices for immediate or future delivery. Inquiries from refiners, marketers and speculators invited. Steel storage and insurance provided at current rates.
J. G. REAVES,
222 North Broadway,
TYLER, TEXAS

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WILL SACRIFICE at 20 cents per acre, 3,500 acres in a solid block in Pitt, Crane and Mifflin Townships, Wyandot County, Ohio, between two proven gas fields. Ten-year leases, 25 cents; rentals paid up to December. No dry holes, good market for gas. J. S. Aber, 318 N.E. Seventeenth St., Miami, Fla.

WANT TO BUY East Texas producing or proven royalty. Write or wire P. O. Box 165, Longview, Tex., giving location immediately.

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Due to the new conservation laws of Texas, it will be necessary to drill 5,000 new wells. The estimated cost of these wells is $182,500,000 for equipment alone.

A large number of these wells will be drilled with used equipment. Here's a field that you cannot afford to overlook.

List your equipment where these men will see it.

The OIL and GAS JOURNAL

TULSA, OKLA.

BUSINESS OPPORTUNITIES

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Commercial gas wells estimated up to 80,000,000 feet and low drilling cost attracting world-wide attention.

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Wellsboro, Pa.

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CAPITAL: An exp. dependable broker will aid in financing projects of merit. Amster Leonard, East Orange, N. J.

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JOHN MORRIS, 3608 WARREN ST., PHILADELPHIA, PA., invites full facts first letter from capable parties planning negotiation of reasonable capital support for undertakings distinctly of higher order. Use registered mail, safeguard data.

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We have the only complete line of general area, lease ownership and oil development maps in East Texas.

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KANSAS OIL FIELD MAPS
The Kansas Blue Print Co.
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Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

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OIL FIELD TRUCKS REPAIRED
SIBERLING TIRES
The Heaston-Carter Motor Service Co.
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Cushing, Oklahoma
"Where Oil Men Meet"
Modern, Fireproof, Coffee Shop.

NEW BRADY HOTEL, TULSA, OKLA.
Tom Wilson, Mgr.
Fireproof, remodeled, new management. Free parking. Prompt, courteous service. Rates $1.00 up. Private baths $1.50.

HOTEL HAWLEY
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Modern fire-proof Hotel. Rooms $1.50 up.

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All Rooms with Bath $2, $2.50, $3.

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Create and Build Sales

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Before disclosing your invention to anyone, send for blank form.
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Casualties Grow in Gasoline War Fronts

Chicago, St. Louis, Detroit, Minneapolis and Other Points Report Many Jobbers and Station Operators Face Extinction

By Robert C. Conine

Chicago Bureau, The Oil and Gas Journal, 6 North Michigan Ave.

CHICAGO, Aug. 24.—The business weeks opens with rumors to suit every taste and with ponderable evidence in conflict with each current prediction. In the actualities the oil trade is seeing continued price improvement in the tank car gasoline markets and the working of a firming up process in the other refined products tank car markets. No increases, it is reported, may be expected this week in the gasoline tank wagon and service station postings by the major refiners.

Several casualties are reported from the price war fronts of Chicago, St. Louis, Detroit, Minneapolis and lesser salients, and this week is expected to show a heavy toll among poorly entrenched jobbers and independent service station operators unless prices are changed in time to stave off bankruptcy. A few bulk plants have been shut down in Detroit and Minneapolis. In Chicago it is known that at least four jobbers have reached within a few feet of the stopping point.

In Detroit and Minneapolis the trackage station operators in the majority of cases have announced an increase of nearly 2 cents in their service station postings. This is taken as an invitation to the majors to make similar advances, but to date the larger interests have shown no inclination to follow. In Chicago the cut-price stations continue to sell at the Stanolind Blue price of 10 cents, 3-cent tax included, and are offering a better grade of gasoline at 1 cent above this price.

Clearing Up Cheap Gasoline

It is a surprising fact that with the ruling price of U. S. Motor gasoline at 4⅞ to 5¼ cents there is a fair quantity of this material coming into Chicago for which the buyer is paying as low as 2⅛ cents a gallon, Group 3. This is gasoline which was intended for June and July delivery and the recipients are voicing no complaints over the unusual delay. Some distributors have from 5 to 25-car orders of 3⅛ and 3¼-cent gasoline en route to their plants.

However, while this is cheap gasoline in one respect, these fortunate buyers are showing no signs of being stampeded by the lull in the spot market trading into grabbing what profit the moment avails them. In fact, the number of 4¼ and 4½-cent sales reported is practically negligible and usually they are stranded orders that are piling up demurrage.

It is noticeable that the broker who always has managed to find a few cars of "distress material" for his bargain specials has lapsed into comparative silence. An interesting case is that of one such marketer who "found" three cars within easy reach and sold them on a 4-cent basis before discovering that the party of the first part had taken cognisance of the improved status of his product. Fortunately the broker's offering had not been sold in turn by the buyer and the buyer did not care to charge the $500 error against the broker.

Stemming Contract Business

Several refiners have discovered that some of their jobber-buyers have a good reason for ordering out material in excess of the customary quantity. Some jobbers who have ordered on a basis of five cars a week for a long time have suddenly found that their requirements call for twice this quantity and have proceeded to call for the maximum allowed in the contract and more. The next discovery was the fact that the additional cars were being turned over to other jobbers who had been unfortunate in the matter of contracts. This surplus material could be bought by jobbers at a price considerably below the open market quotations.

Jobbers have been showing no inclination toward new buying and are reported to be in most cases favorably placed in the matter of storage. Those in the best position have from three to six months' storage on hand and have quantities on which they have given instructions. However, various factors which have been set into operation are expected to bring some changes in the general outlook for the jobbers. One of these is the fact that refiners are beginning to inform the jobbers that "present conditions" are making it impossible for the refiner to ship more material than the customary orders have called for in the past. This means that the jobber who has been ordering 5 cars and now wants 10 cars will not be supplied with more than 5 cars.

The upward movement of the gasoline tank car markets has been bolstered by the crude oil advances, but the continuation in Chicago of the low tank wagon and service station markets has served to arrest further tank car increases otherwise considered warranted. The refienry shutdowns that have followed the closing of the Oklahoma and East Texas fields have stopped the large influx of gasoline from those sources, and demand here has slackened little if any. National figures show that gasoline stocks have dropped nearly 1,500,000 bbls.

Rumors Denied

Among the various rumors denied last week by officials of Standard Oil Co. of Indiana was one to the effect that this company is going to abolish Stanolind Blue, and another that it is going to advance all its tank wagon and service station postings this week. A rumor which was neither denied nor confirmed was to the effect that the price of Stanolind Blue will be dropped another cent in Chicago within the next two or three days. A similar reduction, runs the rumor, will take effect in St. Louis.

Upon a closer scrutiny it is difficult to understand how the rumor concerning the abolition of the third grade by Standard of Indiana has received the attention it has. It may be pointed out that major interests rarely take a step which they have not studied from every conceivable angle, and when a false step is taken it is usually corrected before such important interests as Standard Oil Co. of New Jersey are led astray.

The argument that large as it is Standard Oil Co. of Indiana cannot afford to continue losing money in the "blue price war," appears less of an argument than an unconsidered statement because it by no means has been shown that the third grade gasoline is a money losing proposition. To bring out this point more clearly the observations of a market student who, although not connected with Standard of Indiana, has viewed the progress of the third grade from various angles and found it of lasting worth are given.

Not Entirely Competitive

"It has come to me," says this oil man, "that the Standard Oil Co. of Indiana was not merely interested in the fact that thousands of trackage station operators had sprung up practically overnight and were making deep inroads into the gallonage of the Red Crown stations. Why were the cut-price stations taking over so many Standard of Indiana customers? This was the important question and the answer was that even the guarantee of the major company's brand could not compete with the price consideration among a vast number of customers who are finding the dollar much harder to get than in the days when quality was an important element in their buying.

"The third grade gasoline has brought old friends back to the service station, and it seems to me that the third grade will remain until the customers can return to the quality basis of buying. In view of the fact that the automobile is no longer considered a luxury, but a necessity, it seems apparent that the present buyers of the third grade gasoline themselves will give the signal for the passing of this motor fuel by switching over to the better grade."

The offensive recently launched by the Gasoline Tax Evasion Committee against "gas bootleggers" is beginning to show results. The presidents of two gasoline distributing companies were reported named in true bills charging evasion of the gasoline tax law. The specific accusation against J. C. McGuin, head of Oils, Inc., who has plants in Niles Center and at Peterson Road and Crawford Avenue in Chicago, states that on August 17, he received a car of gasoline from Bartlesville, Okla., although he has no distributors' license and has not posted the $5,000 bond required by law. Under this charge the maximum sentence is six months in the county jail or a $500 fine, or both. Abe Allen, president of Midway Refining Co., South Holland, Ill., is reported facing the charge of having embezzled $50,000 from the State through failure to pay gasoline tax from August 1, 1929, to August 21, 1931.

Attorney General and Mayor to Act

The tax evasion committee, which is made up of representatives of the Standard Oil Co. of Indiana, The Texas Company, Pure Oil Co., Sinclair Refining Co., and the marketing division of the American Petroleum Institute, received the following assurance from Attorney General Oscar Carlstrom (Illinois): "I will give my unqualified support to the State's attorneys, the state department of finance, and the gasoline tax evasion committee representing the petroleum industry in eliminating gasoline tax evasion in the State of Illinois."

A report by this committee to Mayor Anton Cermak of Chicago disclosed that 406 large gasoline tanks in the city are not surrounded by dikes; that fire inspection fees are being evaded at service stations as well as at bulk plants; and that fees belonging to the city are escaping in other devious manners. The committee has now enlisted the support of the mayor.

U. S. Motor gasoline is reported strong at 4⅞ to 5¼ cents with the tendency to advance still further in the next day or two. Monday most of the spot material was moving at 5 cents and above. The higher tests likewise showed marked improvement, the 60-62 400 endpoint gasoline going to 5⅛ to 5⅜ cents. The 64-66 375 endpoint material is selling at 5½ to 5¾ cents. The 68-70 360 endpoint gasoline is quoted at 5⅞ to 6⅛ cents. Although very little blended gasoline is being bought the price of this material has advanced to a range of 4⅝ and 4⅞ cents.

The 50-52 450 endpoint naphtha has advanced a full cent over last week's price and now is quoted at 4½ to 4¾ cents. An announcement from the oil inspection department in Michigan states rather ambiguously that after August 1, no tax will be placed on naphtha. If this exemption includes blending naphtha Chicago distributors expect to see a sudden increase in naphtha shipments into that State.

Kerosene

Although the kerosene markets have not awakened to any noticeable degree of activity, the product is reflecting the improved tone which is strongly emphasized in the gasoline markets. Some sellers are reporting better prices for their material. The general trend among the refiners is to hold on to kerosene, however, until the quotations can be advanced beyond their present levels. The 41-43 water white kerosene is at 2 to 2⅛ cents, while the 42-44 water white material is at 2⅛ to 2¼ cents.

One of the larger refiners operating in the Mid-Continent advanced the price of his bright stocks 2 cents last week. The new postings were on zero to 10 degrees bright stocks: Color 1 (Tag-Rob), 17 cents; 1¼ color, 19 cents, and 1½ color, 21 cents. Neutrals had not advanced after this but were expected to do so.

Several advances are noted in the fuel oil and gas oil markets. The 28-30 zero fuel oil showed an improvement of 2½ cents a barrel, while the zero and industrial grades of gas oil and straw distillate moved up a fraction of a cent. Quotations Monday were: 18-22 fuel oil, per barrel, 20 to 27½ cents; 22-26 fuel oil, per barrel, 25 to 30 cents; 28-30 fuel oil, zero, per barrel, 42½ to 45 cents; 32-36 industrial gas oil, seven-eighths to 1 cent; 32-36 zero gas oil, 1¼ to 1⅜ cents; 38-40 straw distillate, 1¼ to 1½ cents.

The sanitary district of Chicago has invited tenders to furnish and deliver fuel oil to the north side sewage treatment works, 500,000 gallons, and to the west side sewage treatment works, 500,000 gallons. Proposals are to be made on blank forms furnished by the sanitary district and shall be made to conform to all the terms and conditions on bidding and the specifications attached.

Road oil prices quoted by one refiner this week make no distinction in the following grades: E-2, 50 per cent asphaltum; E-3, 60 per cent asphaltum, and E-4, 70 per cent asphaltum. The price on each of these road oils is 3.58 cents delivered in Chicago.

OSAGES HAVE BEEN PAID TOTAL OF $573,772,953

It has paid well to be of Osage Indian blood in the past 15 years or since oil was discovered on the barren hills.

During that period each of the 2,229 members of the Osage tribe have received or been credited with $95,000 as his share of the proceeds from the land. In addition many have received several times that sum in personal royalties from oil companies.

The tribe is divided into two classes, restricted or incompetent Indians and competents. The incompetent are those who were deemed unable to handle their own affairs, and to these guardians were assigned or their interests looked after by the Indian agency; the competents were given their money when due. Of the 2,229 originally enrolled perhaps 1,500 still are living, the headrights having descended by inheritance, and in many cases a single Indian has drawn 10 to 12 headrights with an income when the payments were at their peak of around $100,000.

During the time since the rolls closed the Osages have been paid a total of $573,772,953.

Situation Improving in Eastern Area

Seaboard Tank Wagon and Service Station Markets Expected to Increase. Higher Crude Schedule Anticipated

By A. E. Mockler

New York Bureau, The Oil and Gas Journal, Rooms 1919-21, No. 154 Nassau Street

NEW YORK, Aug. 24.—Closing of the East Texas Field under martial law by Governor Ross Sterling not only strengthened the position of Governor Murray of Oklahoma but brought about the first serious threat of a crude shortage, and this position has been recognized in the East Coast refined products market during the past week by a marking up of gasoline prices and a stiffening in the selling position on all refined products.

While refiners in this area have been somewhat loath to jump at the first opportunity to advance quotations, preferring to await a really substantial basis for such a move thus offsetting the possibility of another siege of price cutting a little later, the abrupt shutting off of about 1,000,000 bbls. of crude a day has reversed the petroleum situation so suddenly that there seems to be no alternative but to mark the price schedules upward. However, tank wagon prices have not yet reflected the stronger position, present movement being confined to tank car quotations.

There seems to be little question but that tank wagon and service station prices will show advances within the next few days. While the situation depends upon the outcome of the crude price controversy in Texas and Oklahoma, market operators here are of the opinion that prices for crude will soon be established upon a basis agreeable to Governor Murray of Oklahoma, namely, $1 per barrel, and that the Texas situation will likewise be brought to a normal basis by the enforcement of the Railroad Commission's conservation law. This would bring about a greatly improved crude market and the higher prices would naturally be reflected down the line of refined products.

Grade "C" bunker fuel oil as well as Diesel oil have been strengthened by the developments of the past week, and it would not be surprising to see quotations here resume their position previous to the recent reductions. Diesel is still held at $1.40 and bunker fuel oil at 70 cents a barrel, both at refinery.

Refinery Gasoline

First division of the market to show a favorable reaction to the strengthening crude situation is tank car, with the market now established on a basis of 6 cents, an advance of one-quarter to one-half a cent. Following the upward revision of several other companies, Standard of New York announced a one-half-cent advance to the 6-cent basis. Earlier in the week Continental Oil had posted a quarter-cent advance on U. S. Motor, its price, tank car at terminals, being set at 5½ cents. Shell Eastern was another major company to adopt the 6-cent basis at its deepwater terminals along the north Atlantic Seaboard, with the exception of Portland, Me., where its quotation was 6½ cents.

Warner-Quinlan took the initiative here by advancing their posted price for bulk gasoline three-quarters cent to the 6-cent level. It is pointed out that withdrawal of crude from storage is now necessary, and that this crude was purchased at higher levels than recently prevailing. It is also declared that when production is resumed in the Oklahoma and Texas fields crude will necessarily have been established on a basis considerably higher than prevailing at the time of the shutdown, and that a basically strengthened refined products market will continue.

The changing situation has brought an abrupt halt to the price slashing in Pennsylvania. First indication was the announcement of a half-cent advance in tank car gasoline to 5½ cents per gallon by the Pure Oil Co.

It is reported on good authority that gasoline stocks are down considerably among East Coast refiners, and that the present basis of 6 cents for tank car will not only be firmly maintained but that further advance may be looked for momentarily.

Tank Wagon Gasoline

While there has been no change in tank wagon quotations in this area, and service station prices continue posted at 15.3 cents, it is considered certain that the rising tank car market cannot help but exert its influence in strengthening tank wagon prices. However, the apparent decision of leading distributors to avoid any indication of a runaway market, which might leave the situation open to just as sudden a price slashing movement, would seem to place tank wagon prices on a firmer but unchanged basis.

The third grade market has shown no change, with consumption continuing on a steady level. However, better business was done during the past week on regular grade gasolines, indicating that many motorists who had shifted to the third grade as an experiment were back at the regular grade pumps.

Considerable interest was created here this past week by the many conflicting stories published on the merger report of the Sinclair Consolidated Oil Corp. Some of the New York papers were almost definite in their assurance that the merger of Sinclair and Tide Water Associated Oil Co., Prairie Oil & Gas Co. and Prairie Pipe Line companies was a fact. This brought forth statements from Axtell J. Byles, president of Tide Water, and others interested in the proposal, to the effect that "no final stage" has been reached. The publication of the earlier stories had had a "beneficial" effect on the stock movements of the companies concerned. Mr. Byles, in his statement, declared that no conclusions had been arrived at "and so far as Tide Water Associated Oil Co. is concerned no agreement of any kind has been reached or has the matter been submitted to the board of directors or any committee thereof for consideration."

Kerosene

The refinery situation shows signs of impending advances, although prices remain at present unchanged on the basis of 4¾ cents for 41-43 water white, the level which has obtained for some time past. There is no more shading of this figure, and buyers are reported as really active for the first time in many months. The reversal of the crude market situation from a buyers' to a sellers' market has had its effect in changing the attitude of both holders and consumers of kerosene. Tank wagon kerosene prices are unchanged, but business is brisker and on a firm basis.

Lubs

Considerable firmness and activity marked the lubricating oils during the past week, with cylinders especially in demand at the higher levels established recently. Refiners feel that the firming up of the crude oil situation places them in a most advantageous position and that continued primary strength will justify further upward price revisions. Buyers are apparently operating under the same belief, as much new business is reported.

The spread in the asking prices of refiners has closed up in cylinder oils, and the market is on a steady basis, with compounders and other buyers showing an indication to cover their needs now in anticipation of a rising market.

Red and pale oils continued unchanged during the week, with business on a routine basis. Inquiries, however, indicate that a revival is to be expected sooner than is seasonably the case.

Fuel Oil

Refiners declare that fuel oil will be the next to feel the upward price surge, and that the present low level of 70 cents for Bunker "C," in bulk at refineries, will not obtain long. As though sensing this, industrial consumers have been active in picking up large quantities of spot goods.

As the present posted price is the lowest in history and was brought about by the demoralization of the crude markets, any improvement in the latter is certain to be quickly reflected in fuels.

Diesel Oil

The Diesel oil situation is similar to that of fuel oil. With the low price of $1.40 per barrel, at refinery, still posted consumers are operating freely in taking on all spot stocks available. It is felt as practically certain that within a few days Diesel price will be marked up probably to a basis of $1.50.

Normal consumption continues about unchanged, with gallonage on a par with the total in 1930 at this time.

Gas Oil

As a direct result of the stronger crude oil market, the gas oil business has shown marked improvement during the past week, with refiners holding firmly to posted prices and talking of advances in their lists. Buyers have been operating freely and there has been little or no distress business available.

Paraffin Wax

Export buying showed more activity during the week, with domestic consumers in the market for stocks in sizeable quantities, as the feeling persisted that the stronger price levels would not only hold but that additional slight advances might be expected.

The entire situation is a sympathetic reaction to the firmer crude and refined products markets emanating from the closing in of the vast East Texas and Oklahoma crude producing units.

Export Market

The market is considerably upset, with inquiries from Paris eliciting the information that asking prices now must be advanced to 5 cents for Navy and 5½ cents for 64. On the basis of these prices, factors in the export market here declare that competition with either Russia or Rumania is out of the question.

There were no export sales reported during the week, and it is declared that little business can be expected, in view of the rising tendency of the entire domestic market.

Foreign buyers are declared to be at a loss to understand the complete turnabout of the domestic market. Whereas they had considered that the market would continue throughout the balance of the year as one favoring the buyer, conditions now indicate that buyers will no longer be in the favored position, but rather would have to again really become buyers, and not merely act as takers of distress offerings.

Petroleum Exports

There were no changes of outstanding importance in the local export market situation during the past week, and movement continued of routine proportions in all divisions of the trade.

The following table shows principal exports of refined petroleum products from New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended—		
	Aug. 15	Aug. 8	Aug. 1
Gasoline	130,000	280,000	76,000
Naphtha	360,000	470,000	450,000
Kerosene	8,000	40,000	40,000
Fuel oil	40,000	285,000	8,000
Lubricating oil	735,000	2,710,000	1,025,000
Pet., refined	628,000	620,000	430,000
	Pounds		
Petrolatum			35,000
Paraffin wax	1,035,000	1,175,000	2,415,000
Refined	45,000	150,000	50,000
Scale	55,000	300,000	260,000
Lub grease	473,000	340,000	1,090,000

Export buyers report that there is still considerable hesitancy on the part of the foreign oil trade in making commitments in the American market, and the tendency in most quarters is to buy only for immediate requirements. Foreign buyers are puzzled by the contradictory tone of the American crude oil and refined products markets, and in most instances are inclined to "play along with the market" rather than to take any chances of stocking up at present prices.

Imports

Imports of crude and refined petroleums at the principal United States ports for the week ended August 15 totaled 1,913,000 bbls., an average of 273,286 bbls. daily, as compared with 923,000 bbls., or 131,857 bbls. daily during the previous week and a daily average of 207,036 bbls. for the four weeks ended August 15. Details follow:

(Barrels of 42 gallons)

At Atlantic Coast ports—	Bbls.
Baltimore	443,000
Boston	66,000
New York	944,000
Philadelphia	167,000
Others	189,000
Total	1,809,000
Daily average	258,429
At Gulf Coast ports—	Bbls.
Galveston district	64,000
Tampa	40,000
Total	104,000
Daily average	14,857
At Atlantic and Gulf Coast ports—	Bbls.
Total	1,913,000
Daily average	273,286
Daily average four weeks	207,036

Distribution of total imports is as follows:

	Bbls.
Crude	428,000
Gasoline	664,000
Gas oil	61,000
Fuel oil	760,000

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic and Gulf Coast ports during the week ended August 15 totaled 115,000 bbls., a daily average of 16,429 bbls., compared with 198,000 bbls., a daily average of 28,286 bbls. during the previous week and a daily average of 35,321 bbls. for the four weeks ended August 15. Details follow:

(Barrels of 42 gallons)

At Atlantic Coast ports—	Bbls.
Philadelphia	115,000
Total	115,000
Daily average	16,429
At Gulf Coast ports—	Bbls.
All ports	none
At Atlantic and Gulf Coast ports—	Bbls.
Total	115,000
Daily average	16,429
Daily average four weeks	35,321

Distribution of total California oil receipts follow:

	Bbls.
Gasoline	115,000

Charter Market

There was little new business reported in either clean or dirty charters during

(Continued on Page 104)

REFINERIES WITH GOOD EQUIPMENT
AND MANAGEMENT
HAVE NOT OPERATED
IN THE RED
ANY MONTH IN 1930
AND 1931

THE WINKLER-KOCH ENGINEERING COMPANY

Consulting and Construction Engineers
WICHITA, KANSAS
L. D. 232

Eastern Representative:
FRANK DeGANAHL,
5836 Grand Central Terminal Bldg.,
New York City.

European Representative:
A. F. CRAIG & COMPANY, LTD.,
Paisley, Scotland
London, England.

ROCKY MOUNTAIN AREA

(Continued from Page 43)

1,750 pounds. From data, it is estimated that 1,600 feet of cement was left in the pipe with 3,900 feet on the back side. This is believed to be ample and safe for the use of cable tools in drilling out. The rotary was torn down and moved to the Johnson-Juhl location. Every one was puzzled as to the cause of the failure, whether it was the high temperature, or high pressure, or a combination of both.

Reiter-Foster company's No. 1 Johnson-Juhl, C SE SE, Section 14-6n-61, a half mile to the northwest, set the 20-inch conductor pipe at 171 feet and is shut down for water.

Continental Oil Co.'s No. 1 Briggs, C SE SW, Section 13-6n-61, an offset to No. 1 Ida Johnson, spudded on August 1 and is drilling at 4,600 feet. It has made rapid progress in spite of the fact that it has had to shut down several times on account of the water shortage. This is a rotary operation and E. F. Moran has the contract. The same company's No. 1 Gadbois, C SE SW, Section 24-6n-61, half a mile to the south of the discovery well, is shut down at 2,604 feet for water. It spudded August 4.

To Build Pipe Line

The State Public Utilities Commission last week granted the Continental company its permit to build a pipe line from the field to its Denver refinery. The line will start in Section 24-6n-61, then go southwest through Hardin to the refinery north of Denver. A technical protest to the construction of the line was filed by the Platte Valley Petroleum Co. to protect its projected line, for which application for a permit is pending, from the field to Orchard. The estimated cost of the Continental's line is $316,331.

New Weld County Area

Interest in another area in Weld County, north of Hudson and 30 miles southwest of the Greasewood operation, was renewed the past week when the Oil Lease Purchase Association, Inc., of which J. W. Clayton is manager, turned a block of 5,000 to 6,000 acres in Townships 2 and 3n, Range 65w, to the Continental Oil Co. The land lies between Hudson and Milton Lake. Evidence of a major high in that area has been accumulating for some time. To the north of the Hudson-Milton Lake area the Midwest Refining Co. closed on a block of 6,720 acres in the Beebe draw section, 8 to 10 miles southeast of Greeley, last spring after doing extensive geological work. To the southeast of the block taken by the Continental company, the Retter Oil Co. is drilling a test that has a good show of oil at 1,100 feet. The Oil Lease Purchase Association, Inc., has retained 6,000 acres of its block. The Derby Oil Co. has some checkerboarded acreage and it is probable several other companies will acquire spreads. The Continental company core drilled the block last spring using a machine that made a 40-inch hole into which the geologists could enter and read the formations in place. This was known as a rotary pit machine used for sinking foundations. It was the first time one of them has been used in this territory. Of a number of holes drilled to 40 to 50 feet, about one-third of them showed some gas. The machine is mounted on a truck and is capable of going 200 to 300 feet. It is probable that the structure will be further worked out with core holes to a depth of 1,000 feet before a test is drilled.

The Retter Oil Co.'s No. 1 Smith C E half, Section 14-1n-66, is bottomed at 1,171 feet and is pulling and rerunning 12½-inch at the top of a sand at 1,100 feet where it has a good show of live oil.

In Morgan County the interest centers principally in the Indian Territory Illuminating Oil Co.'s No. 1 State, C NE NE, Section 16-1n-57, Fort Morgan anticline. This test has been making favorable progress since changing over to rotary and on August 15 it was measuring up, with a total depth corrected to 5,039 feet. Later, and unofficial, reports are to the effect that it is drilling at 5,170 feet. The company is giving out almost no information as to formations, but in other quarters the well is reported to be in the Timpas lime, which should put the Muddy at around 5,600 feet.

Badger Creek Oil & Gas Co.'s No. 1 Kent, SW cor., Section 2-2n-57, is shut down at 1,200 feet to run 12½-inch. Before doing this the cellar will be deepened from 10 to 20 feet and cemented. It is working day time only and is the only cable tool operation in that area.

Independent Oil & Refining Co.'s No. 1 Schmidt, C NE NW, Section 19-6n-60, Greasewood area, has 122-foot steel derrick on location.

Colorado Associated Oil Co.'s No. 1 Pumphrey, C SE SE, Section 14-4n-58, North Fort Morgan Dome, has cellar dug and foundations set. The Midwest Refining Co. is furnishing the rig, which has been loaded in Salt Creek, and the Olson Drilling Co. has the contract.

Adams County

The Hills Dome Lease Development Co.'s No. 1 Hills, SE cor., Section 27-3s-64, in the Watkins district, is shut down at 3,730 feet for new cable. At this depth it is making considerable gas from shale through a heavy column of water.

Arapahoe County

MacDeb Drilling Co.'s No. 1 Fitzsimmons, NE, Section 7-4s-66, near Aurora, is shut down at 5,835 feet with 4¾-inch 50 feet off bottom.

Jefferson County

Ruby Hill Oil & Gas Co.'s No. 1 Braden, SE cor., Section 24-4s-69, near Denver, has resumed and is drilling at 3,930 feet in sandy shale.

Larimer County

Raddatz Corp.'s No. 1 State, SW cor. NW, Section 16-4n-69, Berthoud Dome, joint with Standard Oil Co. of Colorado, is shut down for repairs at 3,025 feet. This well is 125 feet southwest of a well drilled several years ago by the Midwest Refining Co. which had 5,000,000 feet of gas at 2,815 feet, according to a log of the well. Other reports place this gas a little deeper.

A group of Denver men are organizing the Consolidated Drilling Co. to complete No. 1 Maxwell, SE NE NE, Section 25-8n-70, Bellvue district. Operations have been resumed. Total depth is 400 feet and the new interests now have a straight hole after filling back several times. The operation was first started by E. S. Agnew and others, and next taken over by the Erbe Oil Co. Lou Gebhard, of Denver, is one of the new interests.

Lincoln County

Eastern Colorado Oil Co.'s No. 1 State, SE NW, Section 36-14s-57, near Hugo, is drilling below 3,425 feet and carrying 4¾-inch.

Park County

South Park Oil & Gas Co.'s No. 1 Esche, SE cor. NW, Section 5-9s-76, set 8¼-inch on bottom at 2,730 feet and resumed drilling after drying up the hole. Below that depth it reports a show of gas. South Park Oil Co.'s No. 1 Milligan, NE cor. SE, Section 13-8s-76, is at a total depth of 2,404 feet and underreaming 6⅝-inch to bottom. The drillers' log put the top of the Muddy at 2,120 feet. There was a slight show of oil on top of the water.

Rio Blanco County

California Co.'s No. 1 California-Raven, NW SE, Section 30-2n-102, Rangely Dome, is drilling below 1,657 feet, and Magnolia Petroleum Co.'s No. 1 Maddock, C NW SE, Section 9-2s-96, Piceance Creek, is drilling at 1,265 feet in sandy shale.

WYOMING

Efforts of Wyoming executive officials to assist in the stabilization of crude oil prices have resulted in no new developments other than an exchange of letters between Washington and Cheyenne and an announcement by Governor A. M. Clark that expiring leases on state land where there is production will not be renewed for the present without a stipulation as to minimum prices for the oil. Temporary permits to operate the properties will be issued in the meantime. Governor Clark wrote to President Hoover asking him to have the proper agency establish a minimum price of $1 per barrel for Salt Creek crude. Joseph M. Dixon, acting Secretary of the Interior, replied that there was no statutory authority for fixing a minimum price upon oil produced on public land in Wyoming or other states and that the solution of the present crisis was through proration of markets and limiting of production. Such course, he said was to be obtained through co-operative state action rather than Federal control.

Washakie County

Ohio Oil Co.'s No. 1 Strothers, SW SE NW, Section 19-45-92, Neiber Dome, which spudded last March with rotary equipment for a 7,500-foot test, is coring at 7,167 feet in the top of the Frontier formation. So far the formation is dry. It is being drilled under a contract with Grebo Royalties, Inc.

Big Horn County

Utah Southern Oil Co.'s No. 3 Government, NE cor. SW, Section 29-56-97, Garland Dome, is drilling and coring in the Madison lime at 4,230 feet. The cores show considerable saturation. The top of the pay was 3,924 feet. The Portland Association, Inc.'s No. 1, SE NE SE, Section 29-56-97, is bottomed at 4,250 feet in the Madison and fishing for drill pipe. S. C. Ferdig, who started this operation and subsequently turned it over to the interests now drilling, died in Portland, Ore., this week, of poison taken by mistake, according to reports from Cody. Mr. Ferdig was a pioneer operator in the Oregon Basin Field.

Park County

Resolute Oil Co.'s No. 1, NE SW NE, Section 17-57-101, Badger Basin, the discovery well on that dome and the deepest drilled in the Rocky Mountain area, flowed at the rate of 250 bbls. per day, the oil being very high gravity and testing 50 degrees, upon being pressured. The well is being produced through an adjustable flow bean with 1,000 pounds back pressure at the casinghead and without tubing in the hole. The total depth is 8,725 feet. The lower section of the well is reported to have cut formations as follows:

	Feet
First Wall Creek	8,200 to 8,305
Shale	8,305 to 8,355
Second member, 1st Wall Creek	8,355 to 8,375
Shale	8,375 to 8,491
Second Wall Creek	8,491 to 8,590
Black and gray shale (start of Mowry)	8,590 to 8,725

Natrona County

Midwest Refining Co.'s No. 11 Middy, C NE NE, Section 23-35-79, Midway Dome, after plugging back to 5,983 feet, is still cleaning out bridges above the Muddy sand and has not yet been able to make a test.

Western Producers, Inc.'s No. 1, SW, Section 5-39-78, east side of Salt Creek, is drilling at 1,215 feet in shale with shale production expected at 1,500 feet. This is on acreage taken over some time ago by C. T. Andrews and associates.

Converse County

Continental Oil Co.'s No. 50 Whiteside, NW SW SW, Section 9-33-76, Big Muddy, which is being deepened from the Frontier to the Lakota, is rigging up cable tools to drill in. Total depth is 4,376 feet with 6¼-inch cemented at 4,370 feet. It looks as if it will be a good well. The only other well drilled to this horizon was put down by the Ohio Oil Co. on the same section and averaged 350 bbls. initial.

Otto Olston and others' No. 1 Carey ranch, Section 6-32-74, Box Elder Basin, joint with Benzol Corp., of Chicago, is drilling at 500 feet after setting 10-inch at 320 feet.

Niobrara County

Indian Petroleum Co.'s No. 1, NE NW NE, Section 7-35-65, Lance Creek, an old well being deepened to the Sundance, is bottomed at 4,115 feet and fishing for tools. It is showing some gas and is estimated to be less than 100 feet from the objective.

Interstate Oil & Refining Co.'s No. 1, Section 2-29-61, West Mule Creek, a test to the Minnelusa, is drilling below 200 feet.

Weston County

A good completion is reported in Yellowstone Petroleum Co.'s No. 1, NE cor. NW, Section 23-46-64, on the western side the Osage Pool and to the west of Beaver Creek, in an extension of the field that is yielding some nice wells. It found the sand at 1,830-68 feet and will flow 125 bbls. natural. However, it will be shot. The growing importance of this western extension has caused the Osage Operators Association to ask for a resurvey of the territory west of Beaver Creek to be made by the United States Land Office. Many corners marking the original surveys are missing.

Two wells are drilling in this west extension. Tom Don and others' No. 3, NW SW SE, Section 23-46-64, is spudding, and Wytex Oil Co.'s No. 7 Logan McCullough, NW SW NE, Section 23-46-64, is setting casing at 1,770 feet.

Bradley-Manewal's No. 10, SE NW, Section 20-46-63, is drilling at 850 feet and Riggs Oil Co.'s No. 1, SE cor. NE, Section 16-46-64, is drilling at 1,700 feet. Chadron-Osage Oil Co.'s No. 14, SE cor. SW, Section 14-46-64, has rig on location.

Outside of the Osage district, Julius Peters and others' No. 1 Wtizell, SE cor. NW, Section 30-46-64, Fiddler Creek, is drilling below 1,800 feet after reconditioning old hole. Gose Oil Syndicate's No. 1, NE cor., Section 28-47-63, Soda Creek, is drilling at 4,925 feet. Stockade Anticline Syndicate's No. 1 Lak ranch, Section 32-45-60, 7 miles east of Newcastle, is drilling at 600 feet. It will test the Pennsylvania at 900 to 1,000 feet.

Fremont County

Kinney-Coastal Oil Co.'s No. 1 Chatteron-Weeks, C SW NE, Section 22-3n-1w, Pilot Butte, is drilling at 1,900 feet in blue shale. Producers & Refiners Co.'s No. 2, NW SE NW, Section 33-34-92, Muskrat Dome, is milling on iron after cementing back to 4,810 feet.

Carbon County

Prairie Oil & Gas Co.'s No. 1 Bunker Hill, SE cor. SW, Section 29-27-89, is drilling at 2,095 feet in broken sand and shale. Producers & Refiners' No. 1 Overland Dome, SW cor., Section 19-20-83, is shut down at 1,366 feet. Midwest Refining Co.'s No. 27 Union Pacific, NW SE SE, Section 11-20-81, Elk Mountain, is drilling at 3,480 feet in shale.

Sweetwater County

Vermillion Oil Co.'s No. 1 State, SW cor., Section 16-12-99, Hiawatha Dome, is bottomed at 4,350 feet and lowering 8¼-inch. It cut a sand at 3,885-3,920 feet from which oil rose 300 feet in the hole. This horizon is an older formation in the Tertiary than the sand yielding gas on the top of the dome.

MONTANA

Carbon County

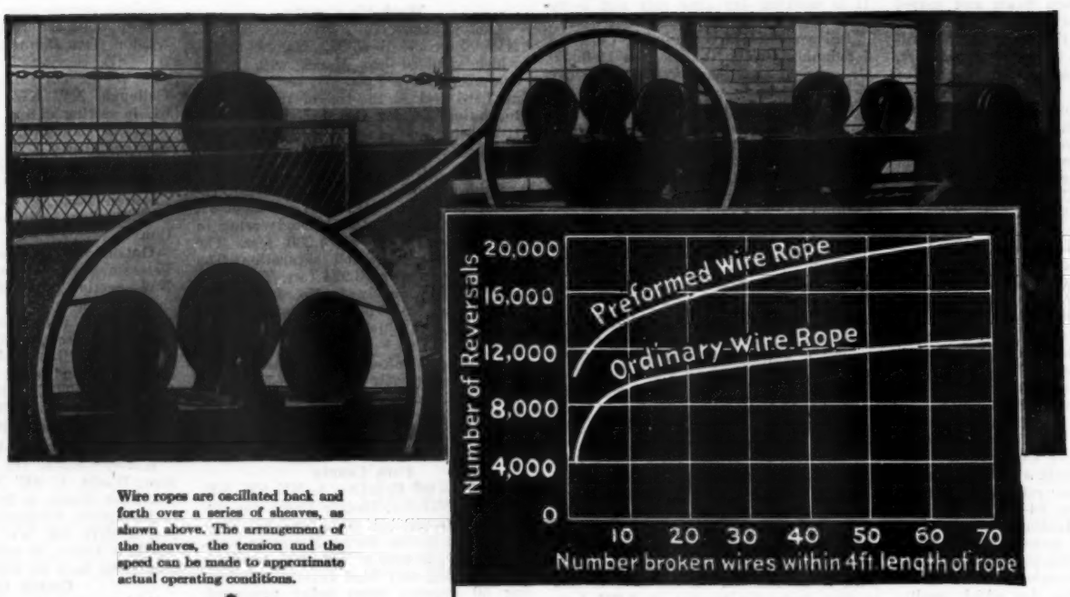
Ohio Oil Co. has started two new operations on the Dry Creek structure in its No. 2 Montana Industrial, C NW SE, Section 11-7s-21, near the discovery, and No. 2 Souders, C SE SE, Section 2-7s-21, for which cellars are being dug. The company's No. 1 Montana Industrial, SE SW NE, Section 11-7-21, an offset on the north, was reported a completion two weeks ago at 5,439 feet for 10 bbls. of oil and 800,000 feet of gas after plugging back from 5,581 feet. Its No. 1 Souders, C SW SE, Section 2-7-21, half a mile to the north, was completed at 4,409 feet in the second Frontier for 3,500,000 feet of gas with a pressure of 1,450 pounds. It is understood this well since has increased to 15,000,000 feet a day.

Carbon Oil & Gas Co.'s No. 1 Armstrong, SW cor. NW, Section 7-7s-22, is coring at 4,443 feet in shaley sand, believed to be the second Frontier and is showing considerable gas.

Ohio Oil Co.'s No. 1 Chapman, C SW SW, Section 2-7-21, is drilling at 2,180 feet.

Glacier County

Seven wells with an aggregate open flow capacity of 116,500,000 feet of gas daily so far have been completed in the Cut Bank Field by L. B. O'Neil, as agent for the Montana Power Co., which is constructing a major gas line system to Helena and Butte. All are shut in. Three new wells are being started which, with the three wells drilling, are expected to outline the area of the field and furnish an ample gas reserve for the present and probably will end the drilling campaign at this time. The last well completed, No. 1 State, C SW SW, Section 36-36-5w, gauged 13,000,000 feet from sand



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2,801-30 feet. It is about 1 mile east of the nearest producer.

The new operations are No. 1 Peterson, C, Section 21-35-5w, 3½ miles to the south and west of the nearest producer; No. 1 State, C NE, Section 9-35-5w, an intermediate location; and No. 1 Henderson, C SE, Section 35-36-5w, in proven territory. The first named has rig up and the last two have spudded. The drilling wells are as follows: No. 2 Michaels, C SW NE, Section 33-36-5w, drilling at 1,400 feet; No. 2 State, C NE SW, Section 33-36-5w, drilling at 2,000 feet; and No. 1 State, C NE NW, Section 11-35-5w, drilling at 2,200 feet.

Fulton Petroleum Co.'s No. 1 Blackfeet, SW NE NE, Section 28-36-12w, Milk River district, is drilling at 2,590 feet after cementing caves between 1,700 and 2,570 feet.

Liberty County

Eleanor Association's No. 1, SE SE, Section 11-33-6e, Utopia district, which was taken over by the California Co. to complete, is bailing sand and water at 3,230 feet. It had a slight show of oil with the water.

In the Bear's Den district, G. G. Howard's No. 2 Schoonover, C SE NE, Section 13-36-5e, is ready to spud, and People's Oil & Gas Co.'s No. 1 First National Bank, C SE NW, Section 17-36-6e, landed pipe on bottom at 1,285 feet and is cleaning out. Liberty Gas Co.'s No. 1 McDowell, C SE SW, Section 13-36-5e, is drilling at 2,000 feet.

Rosebud County

Prairie Oil & Gas Co.'s No. 1-XX, Contract 3, NE SW NW, Section 26-10-39, Porcupine Dome, is drilling with rotary at 620 feet after setting 20-inch conductor pipe.

Teton County

California Co.'s No. 1 Sullivan, NW NE NW, Section 34-27-7w, Bynum district, is drilling at 1,490 feet in dark shale, Trans-American Oil Co.'s No. 1 Lackey, SE NE NW, Section 28-24-8w, is drilling at 700 feet after cementing pipe.

Toole County

Oregon Oil Syndicate's No. 1, SW NE SE, Section 20-36-2e, Barthelote district, is spudding.

Pipe Line Runs

Average daily pipe line runs in week ending August 22:

WYOMING	
Salt Creek	21,300
Big Muddy	1,860
Byron	10
Dallas-Derby	410
Dutton Creek	.....
Elk Basin	590
Ferris	40
Frannie	40
Grass Creek	2,080
Hudson	210
LaBarge	800
Lance Creek	770
Lost Soldier	2,970
Lovell	.....
Oregon Basin	1,200
Osage	1,060
Rock River	1,890
Poison Spider	180
Simpson Ridge	.....
South Casper	.....
Teapot	20
Warm Springs	70
Total Wyoming	35,500
MONTANA	
Buckley-Border	600
Cat Creek	950
Dry Creek	370
Kevin-Sunburst	4,410
Lake Basin	70
Pondera	1,470
Total Montana	7,870
COLORADO	
Florence	300
Fort Collins	870
Iles	1,220
Moffat	820
Orchard	320
Rangely	20
Tow Creek	320
Walden	10
Total Colorado	3,880
NEW MEXICO	
Rattlesnake	320
Hogback	520
Table Mesa	78
Artesia	216
Cap Rock	.....
Getty	.....
Hobbs	37,050
Jal	1,112
Lea City	2,200
Eunice	496
Total New Mexico	42,492
Total Rocky Mountain area	89,742
Total previous week	91,775
Difference	2,033

EAST CENTRAL TEXAS WILDCATS

(Continued from Page 25)

DALLAS COUNTY

Paris' No. 1 Wilkinson, 2,787 ft. from NW and 3,241 ft. from SW of John P. Anderson Sur. ..... T. D. 870 ft.; shut down

DELTA COUNTY

Doyle & Jondeau's No. 1 C. S. Legatt ..... Rig up.

D. S. Hood's No. 1 J. J. Balser, 185 ft. from S and 580 ft. W of Balser 40-ac. tract in SE cor. T. B. Laddin Sur. ..... Shut down 1,559 ft.

ELLIS COUNTY

E. M. Roger's No. 1 John Lee Winn, 1,650 ft. from E and 510 ft. from S of Orland ..... Shut down 1,360 ft.; drill stem in hole.

FREESTONE COUNTY

Raley and Clark's No. 1 McLancaster (Pampier), 150 ft. from E of W line and center of N and S line B. Avant Sur. ..... Derrick.

GREGG COUNTY

Abernathy et al's No. 1 L. A. Rodden, 680 ft. from N and 320 ft. from E lines of Martha Dillard Sur. .. Top Austin chalk 3,521 ft.; set csg.

N. M. Acre et al's No. 1 S. J. Boles, 16 ft. S and 153 ft. E of SE cor. of William Carleton Sur. but in Carl Rhodes Sur. ..... Location.

Alma Petroleum Co.'s No. 1 J. W. L. Younes, 450 ft. from N and 200 ft. from W 86-ac. tract in William Goodman Sur. ..... Drlg. 2,780 ft.

Atlantic Prod. Co.'s No. 1 J. J. Fuller, 394 ft. from E and 343 ft. from S of 50-ac. tract and lease, Mowery Irwin Sur. ..... Derrick.

Atlantic Oil Prod. Co.'s No. 2 M. Haynes, 1,200 ft. from E lines of 548-ac. tract, W. C. Alvice Sur. .... Location.

Atlantic Oil Production Co.'s No. 1 Meyers, 400 ft. from S line and 300 ft. from W line of tract and in A. T. McGee Sur. ..... Location.

Armstrong and Pitts' No. 1 Walker, 940 ft. from N and 1,970 ft. from E of survey, Martha Dillard Sur. ..... Derrick.

P. P. Ash et al's No. 1 A. H. Tubbs, 1,550 ft. from S and 4,120 ft. from E of survey, Dolores Sanches Sur. ..... Derrick.

Becker et al's No. 1 J. C. Barrett, 330 ft. from S and W lines of N 100 acres of 320-ac. tract in G. W. Hooper Sur. ..... Top sand 3,608 ft.; 800 ft. of oil in hole; T. D. 3,620 ft.

Barnsdall Oil Co.'s No. 1 G. E. Adams, 1,150 ft. from S and 3,720 ft. from W of G. W. Hooper Sur. ..... Derrick.

Bob et al's No. 1 T. L. Brop, 290 ft. from E and 1,640 ft. from S of H. A. Holdt Sur. ..... Derrick.

M. T. Beeler's No. 1 Finley and Thomas, 150 ft. from N and 150 ft. from W of 10-ac. lease, C. H. Alexander Sur. ..... Derrick.

Branson et al's No. 1 J. J. Fuller, 1,050 ft. from N and 170 ft. from W of survey, M. Alexander Sur. .. Derrick.

B. L. Brooklin's No. 1 J. M. Tuttle, 150 ft. from N and 205 ft. from E of 12½-ac. lease, William H. Castleberry Sur. ..... Shut down 2,800 ft.

Callahan et al's No. 2 Mollie Penn, 450 ft. from S and 150 ft. from W lines of 44-ac. tract in D. Ferguson Sur. ..... Rigging up.

Campbell and Lee's No. 1 A. Johnson, 170 ft. from N line and 134 ft. from E line of 11-ac. lease in the M. Dillard Sur. ..... Location.

Columbia Oil & Gas Co.'s No. 1-A Harley, 650 ft. E and 300 ft. S of SE cor. of Laura Walker 45-ac. tract, William Robinson Sur. ..... Derrick.

Continental Oil Co.'s No. 1 J. J. Flewellen, 359 ft. from N and 949 ft. from E of 200-ac. lease, Marshall Mann Sur. ..... Location.

Cox and Hammond's No. 1 L. A. Rodden, 1,319 ft. from N and 602 ft. E of SE cor. of 105-ac. tract in John R. Crosby Sur. ..... Drlg. 3,250 ft.

Davis and Russell's No. 1 M. E. Anderson, 150 ft. from E and 75 ft. from S of 3-ac. lease in Kilgore Townsite, Mary Van Winkle Sur. ..... Shut down 3,558 ft.

Charles Davidson et al's No. 1 Paul Jones, 7,000 ft. from most southerly N line and 3,600 ft. from W, W. P. Chisum Sur. ..... Waiting on csg. 3,666 ft.

Duffey-Davis and McGrede's No. 1, 1,310 ft. from N and 3,160 ft. from E of survey, Martha Dillard Sur. ..... Waiting on csg.

Eastland Oil & Gas Co.'s No. 1 B. B. Sparks, 150 ft. from N and 150 ft. from W of E 50 acres of 100-ac. tract, Harvey R. Kirk Sur. ..... Shut down 3,125 ft.

Dr. J. C. Falvey et al's No. 1 fee, 150 ft. from S and 150 ft. from W of 58-ac. tract, Marshall Mann Sur. ..... Rig up.

Fain & McGaha's No. 1 Corbin, 950 ft. from N line of lease and 1,425 ft. from W line of survey in the H. Edwards Sur. ..... Location.

Golding and Murchison's No. 1 Sallie Smith, 300 ft. out of NW cor. of lease in the Mary Scott Sur. .... Drlg. 2,936 ft.

Greer's No. 1 L. M. Colburn, 150 ft. from E and 150 ft. from S of 45-ac. lease, 5,700 ft. from E and 350 ft. from N of survey, Henry Hathaway Sur. ..... Rig up.

Harper Petroleum Corp.'s No. 1 Woodley Jones, 2,000 ft. from N line and 3,900 ft. from E line of William H. Castleberry Sur. ..... Derrick.

Galves Petroleum Corp.'s No. 1 M. T. Cole, 1,000 ft. E and 2,100 ft. N of NE cor. of Samuel Brooks Sur. in the J. M. Meador Sur. ..... Drlg. 3,490 ft.

Howard and Russell's No. 1 Stone, 150 ft. from N and 150 ft. from E of 100-ac. tract, Bailey Anderson Sur. ..... Derrick.

Humble Oil & Refining Co.'s No. 1 H. M. Lawrence, 540 ft. from N and 219 ft. from W of 100-ac. tract, David Ferguson Sur. ..... Moving in material.

Humble Oil & Refining Co.'s No. 1 J. H. Sheppard, NE cor. of 215-ac. tract in I. Allen Sur. ..... Derrick.

Humble Oil & Refining Co.'s No. 1 J. M. McFarland, 1,400 ft. from N and 449 ft. from W lines of 57.5-ac. tract, L. J. Rigsby Sur. ..... Location.

K. B. Oil Co.'s No. 1 Dickson, 150 ft. from S and 150 ft. from W of 5-ac. lease, Mary Van Winkle Sur. ..... Rig rig.

Kiltner and Easterling's No. 1 Missie Young, 230 ft. S and 250 ft. E of SW cor. of the H. Edwards Sur. in the C. Rhodes Sur. ..... Derrick.

Kimsey-Trimble's No. 1 Griffith Davis, 922 ft. E of N line of Griffith Davis 119.5-ac. tract from NW cor. of same and 145 ft. at right angles, W. P. Chisum Sur. ..... Set csg.; T. D. 3,670 ft.

Charles Love et al's No. 1 J. B. Doby, 150 ft. from E and 150 ft. from S of S 6 acres of W 42 acres of 170-ac. tract, W. H. Castleberry Sur. ..... Derrick.

J. K. Livingston Oil Co.'s No. 1 D. C. Johnson, 200 ft. from N and 150 ft. from E of survey, Martha Dillard Sur. ..... Top Pecan Gap 2,480 ft.; shut down 2,810 ft.

Magnolia Petroleum Co.'s No. 1 L. F. M. Fonville, 150 ft. from S and 440 ft. from E lines of 50-ac. lease, W. M. Tyndale Sur. ..... Location.

Ross et al's No. 1, located on Findley & Thomas 50-ac. tract, 150 ft. from S line of 6.66-ac. lease, C. H. Alexander Sur. ..... Derrick.

Scheig et al's No. 1 Rube Smith, 1,100 ft. N and 300 ft. from W of tract and survey, Slaughter Sur. .... Derrick.

Earl Sneed et al's No. 1 A. M. Kensel, 293 ft. from N and 260 ft. from W of N 23-ac. lease in 94 acres, H. H. Kirk Sur. ..... Location.

Sun Oil Co.'s No. 1 J. W. Akin, 330 ft. from N and W lines of 25.68-ac. tract in George A. Thomason Sur. ..... Set 6⅝-in. csg. 3,513 ft.

L. C. Thorpe's No. 1 J. A. Butts, 4,850 ft. S of N and 5,300 ft. E of W line of survey, Mary Van Winkle Sur. ..... Top sand 3,535 ft.; T. D. 3,580 ft.; well caught fire and burned for 5 hrs.

Tidal Oil Co.'s No. 1 Lake Divernia Fish and Game Club, 300 ft. from N and 550 ft. from W lines of tract in William G. Painter Sur. ..... Rig up.

Valentine Oil Co.'s No. 1 Goyne-Hughey, 6,100 ft. from S and 6,800 ft. from W of survey, Mary Van Winkle Sur. ..... Derrick.

H. M. Wages et al's No. 1 Finley and Thomas, 165 ft. from E and 150 ft. from S of 10-ac. lease, Charles H. Alexander Sur. ..... Shut down 3,200 ft.

L. H. Wentz Oil Co.'s No. 1 G. W. Richie, 280 ft. S of NE cor. of W 20 acres of 40-ac. tract in the William Carlton Sur. ..... Drlg. 1,125 ft.

Woodley Petroleum Co.'s No. 1 Dyers, 300 ft. from S and 300 ft. from W of 640-ac. lease, H. Hathaway Sur. ..... Derrick.

Ziegler Oil Co.'s No. 1 L. D. Campbell, 540 ft. from N and 219 ft. from E of 72½-ac. tract, David Ferguson Sur. ..... Derrick.

HENDERSON COUNTY

Westside Investment Co.'s No. 1 Thornhill, 450 varas from W and 400 varas from N line of survey, James Spivey heirs Sur. ..... Shut down 4,850 ft.

HOPKINS COUNTY

Thelma Wells' No. 1 Taylor, 220 ft. from N and W lines of 80-ac. tract in the John Polk Sur. ..... Rig up.

HOUSTON COUNTY

N. E. Irish's No. 1 Mrs. Byrdie Watters, 2,300 ft. W and 300 ft. S from the NE cor. of I. J. Ellis Sur. ..... Spudded and shut down.

Ramsland and Ramsland's No. 1 Pennington, 750 varas W of E line and 500 varas from S line of survey on 186-ac. tract, Ramond LaGarza Sur. ..... Shut down 620 ft.

Phillips and Phillips' No. 1 Kennedy Bros., 485 varas out of SW cor. of 100-ac. tract, Jose M. Procella Sur. ..... Rig up and shut down.

HUNT COUNTY

Foster and Earl's No. 1 Whitney and Clark, 150 ft. out of NW cor. of 50-ac. tract in W. H. Landrum Sur. .... Location.

LAMAR COUNTY

Indian States Oil Co.'s No. 1 W. T. Watson in Ignalius Aud Sur. ..... Shut down 4,026 ft.

Puritan's No. 1 George Parr, 2,000 ft. from W of Frisco Railway and 1,000 ft. from E line of R. Russell Sur. ..... Ready to spud.

LEON COUNTY

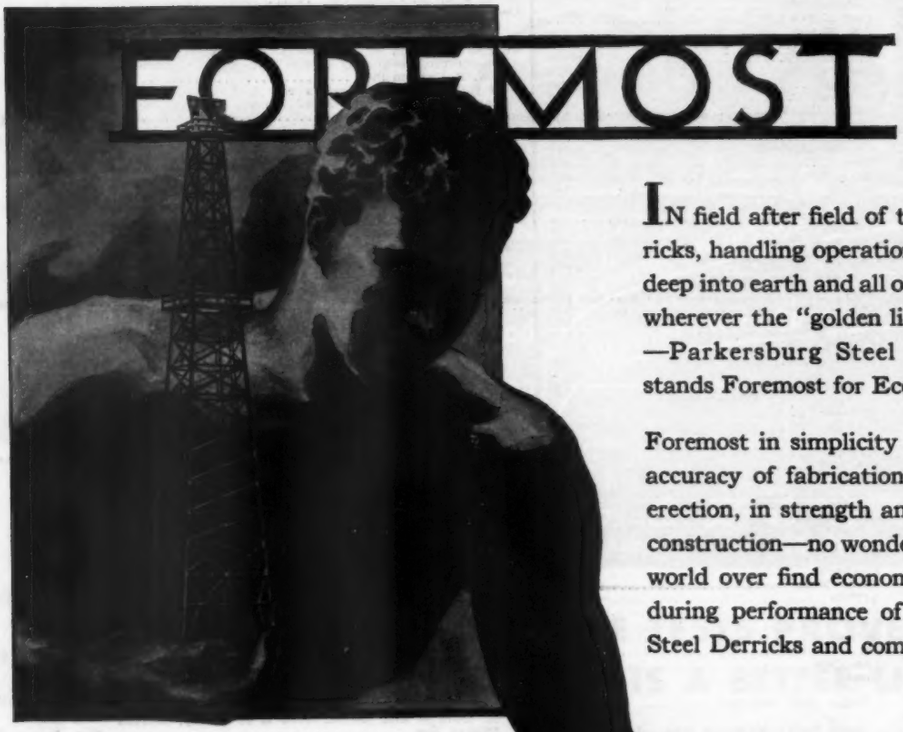
Cooper et al's No. 1 Lynch, 4,000 ft. from W line and 250 ft. N from the S line of Thomas H. Gardner Sur., and in 200-ac. tract ..... Shut down 1,200 ft.

Deep Rock Oil Co.'s No. 1 Pearlstone ..... Drlg. 350 ft.

Sun Oil Co.'s No. 2 Grayson ..... Shut down 3,741 ft.

LIMESTONE COUNTY

George McCamey's No. 1 B. K. Arnett, center of Blk. 13 in Casson Townsite ..... Shut down 1,720 ft.



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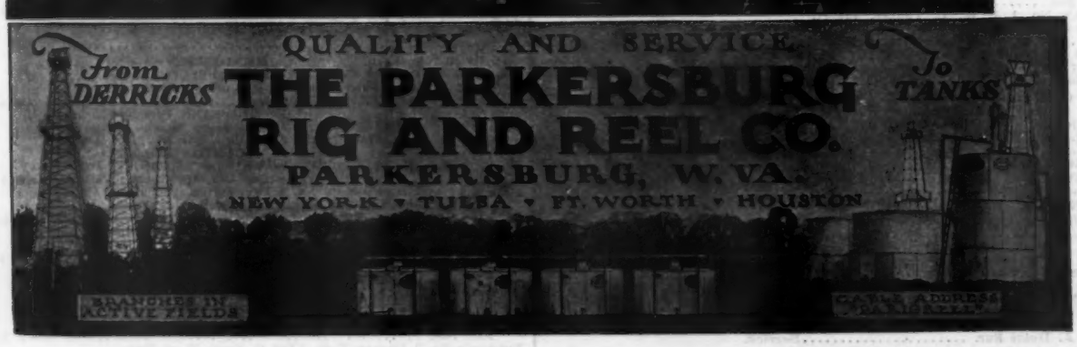
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MORRIS COUNTY

Dumas et al's No. 1 Tom Ball, 1,046 ft. from E and 248 ft. from S of 71-ac. tract, A. S. Young heirs Sur. ..... Derrick.

NACOGDOCHES COUNTY

Bunte et al's No. 1 A. F. Boatman, 330 ft. from S and 150 ft. from W of 67-ac. tract, William A. Moore Sur. ..... Shut down 1,605 ft.

Burke et al's No. 1 F. R. Patterson, 6,515 varas from W and 315 varas from W line of Patterson 70-ac. tract, Joseph Las Santos Chay Sur. ..... Shut down 4,290 ft.

Churchill-Armstrong's No. 1 Max W. Hart, 2,640 ft. from N line and 2,640 ft. from S of N line of survey, George Pollett Sur. ..... Rig up.

Foreman and Weller's No. 1 Norris, 80 ft. NW of E line and 420 ft. S of road, in 73.5-ac. tract, Hossea Y. Barbo Sur. ..... Rigging up.

Foreman et al's No. 1 Robert Mattaner, NW cor. of 520-ac. tract, J. A. Cherino grant ..... Rig up and shut down.

Gainer et al's No. 1 Nice Well, 18 miles SE of Nacogdoches, 600 ft. from S and 150 ft. from W of Wells tract in A. Cherino Sur. ..... Reaming 3,070 ft.

Harwell and Scott's No. 1 R. I. Driver, 1,500 ft. from SE cor. of P. B. Ballard 125-ac. tract, 15 miles SE of Nacogdoches in Patricia De Torres Sur. ..... Shut down 2,330 ft.

Joiner and Henson's No. 1 Andy Legg, 330 ft. from N and 330 ft. from W of tract, John Durst Sur. ..... Shut down 3,920 ft.

Morgan Oil Corp.'s No. 1 R. E. Burt, center of J. L. Reed 20-ac. tract, Jose Luy De La Boga Sur. ..... Shut down 4,012 ft.

Naco Oil Co.'s No. 1 J. C. Orton, 1,000 ft. NE of highway and E of town and E of creek in Nacogdoches Townsite, A. Riola Sur. ..... Spudding.

W. W. Wheeler's No. 1 I. D. Parmley, about 155 varas N of S line and about center of E line of survey, John Kirby Sur. ..... Shut down 3,850 ft.

Sequia's No. 1 Vanover, 6,072 ft. from N and 6,636 ft. from E of Alford Oliver Sur., E Boyd E 100-ac. tract ..... Derrick.

Taylor-Vaughn's No. 1 Dixon Greer, 160 ft. from W and 450 ft. from N lines of 60-ac. tract in the M. G. Horrera Sur. ..... Shut down 132 ft.; drlg. water well.

Big Indian Oil Co.'s No. 1 J. N. Stewart, center of 79-ac. tract in the Jose Ignacio Ybarbo Sur. ..... Derrick.

L. E. Trout and Dixon's No. 1 E. A. Blount, 150 ft. out of NW cor. of survey and tract, E. D. Williams Sur. ..... Rig up and shut down.

RAINS COUNTY

Berry and Hale's No. 1 Ownsby, 150 ft. N and 1,100 ft. from E of most easterly SE cor. of survey, Alexander Sur. ..... Preparing to start drlg.; T. D. 2,095 ft.

RED RIVER COUNTY

Royle and Jondreau's No. 1 V. S. Griffin, 700 ft. from N line and 650 ft. E of W line of survey, J. C. Brown Sur. ..... Derrick.

Droppleman and Bundy's No. 1 J. W. Cunningham, 250 ft. from the S and 1,066 ft. from the E lines of B. M. Ballard Sur. ..... Rig up.

Harris & Joiner's No. 1 E. Howison, 225 ft. S, 185 ft. W of 79-ac. tract, William Humphreys Sur. ..... Preparing to start up; T. D. 2,216 ft.

Johnson Petroleum Syndicate's No. 1 Warren Randolph.. Shut down 2,460 ft.

Pearsons et al's No. 1 J. R. Dellahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. ..... T. D. 740 ft.; preparing to set 10-in. csg.

ROCKWELL COUNTY

J. F. Barron's No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. ..... Waiting on csg.; T. D. 120 ft.

RUSK COUNTY—MISCELLANEOUS

Humble Oil & Refining Co.'s No. 1-B Hayward White, 990 ft. from N and 362 ft. from W lines of 134-ac. tract in J. M. Scott Sur. ..... Rig up.

Devonian's No. 1 Mrs. Janie Alford, 150 ft. from N and W lines of E 40-ac. Alford tract in Henry B. Dance Sur. ..... Derrick.

KILGORE AREA—RUSK COUNTY

E. L. Chapman's No. 1 B. O. J. Russell, 200 ft. from N and E lines of 38-ac. tract in J. English Sur. .... Top sand 3,654 ft.; T. D. 3,665 ft.

Crider and Manley's No. 1 R. A. Metley, 600 ft. from S and 1,150 ft. from W of J. T. McDaniels Sur. .... Derrick.

Harry Elliott's No. 1 Carroll, 175 ft. from N and 200 ft. from E of 7-ac. tract, W. R. Cook Sur. ..... Location.

Humble Oil & Refining Co.'s No. 1 R. E. Holt, 330 ft. from N and E lines of 91.4-ac. tract in the J. M. Barton Sur. ..... Rig up and shut down.

Lyle and Orr's No. 1 Powers, 2,200 ft. from N and 360 ft. from E of survey, J. Womack Sur. ..... Rig up.

Moser's No. 1 Buntyn, 554 ft. from N and 325 ft. from E of survey, the most northeasterly cor. of survey, J. C. Snow Sur. ..... Drlg. 1,575 ft.

Humble Oil & Refining Co.'s No. 1 George Alexander, 330 ft. from N and 500 ft. from W lines of 100-ac. tract in the Thomas H. Smith Sur. ..... Coring 3,711 ft.

Humble Oil & Refining Co.'s No. 1 Eula McDavid, 330 ft. from S and 400 ft. from NW lines of 88.6-ac. tract in the T. H. Smith Sur. ..... Top sand 3,674 ft.

Imperator Oil Co.'s No. 1 J. Johnson, 150 ft. from S and 250 ft. SW of railroad on 17-ac. tract in the H. B. Dance Sur. ..... Drlg. 2,670 ft.

Pelton Petroleum Co.'s No. 1 C. O. Christian, 775 ft. N and 500 ft. W of NW cor. of Meredith McCabe Sur. in the J. S. Whiteman Sur. ..... Drlg. 3,480 ft.

Mrs. Joyce Richardson, 150 ft. from N and 150 ft. from W of 10-ac. tract, Robert W. Smith Sur. ..... Derrick blown down.

Shell Petroleum Corp.'s No. 1 W. P. Moore, 1,075 ft. from N and 208 ft. from E lines of H. Wiggins Sur., Abstract 875 ..... Reaming to set 6-in. csg.; top sand 3,713 ft.

Southern Crude Oil Pur. Co.'s No. 1 Rena Christian, 330 ft. from E and 150 ft. from S of lease, W. R. Cooke Sur. ..... Top sand 3,668 ft.; T. D. 3,674 ft.; preparing to run csg.

State Production Co.'s No. 1 Gipson, 630 ft. from N and 175 ft. from E lines of tract in T. Lloyd Sur. .... Spudded and shut down.

JOINER POOL—RUSK COUNTY

Armstrong's No. 1 Alford, 151 ft. from S and 1,080 ft. from W of survey, T. J. Moore Sur. ..... Derrick.

Bullock's No. 1 Alford, 1,300 ft. from S and 150 ft. from W of survey, T. J. Moore Sur. ..... Shut down 2,953 ft.

Campbell Oil Co.'s No. 1 Compton, 600 ft. from N and W line and Simon Del Rio Sur., 1¼ miles NW of Minden ..... Derrick.

Cap Rock Oil Co.'s No. 1 Burton, 1,100 ft. E of W line and 520 ft. S of N line in SE cor. of 62½-ac. tract, Juan Jose Yarbo Sur. ..... Drlg. 1,225 ft.

Dunnigan and Holt's No. 1 Cansler, 150 ft. N and W of SW cor. Gabe McIlroy 16.3-ac. tract in F. Cordova Sur. ..... Drlg. 2,950 ft.

Elzy and Tauteaham's No. 1 Deason, 1,300 ft. from W and 3,700 ft. from S of survey, Juan Ximenes Sur. .. Shut down 2,310 ft.

Elzy Drlg. Co.'s No. 1 Frederick, 150 ft. from S and 603 ft. from W of Frederick 90-ac. tract, Juan Ximenes Sur. ..... Derrick.

C. C. Julian's No. 1 Motley, 780 ft. from N and 1,673 ft. from W of survey, J. T. McDaniels Sur. ..... Set csg.; T. D. 191 ft.

Leonard Petroleum Co.'s No. 1 Sanger Bros., 990 ft. from N and 350 ft. from W of survey, J. P. Meredith Sur. ..... Shut down 4,079 ft.; cored sand; oil show.

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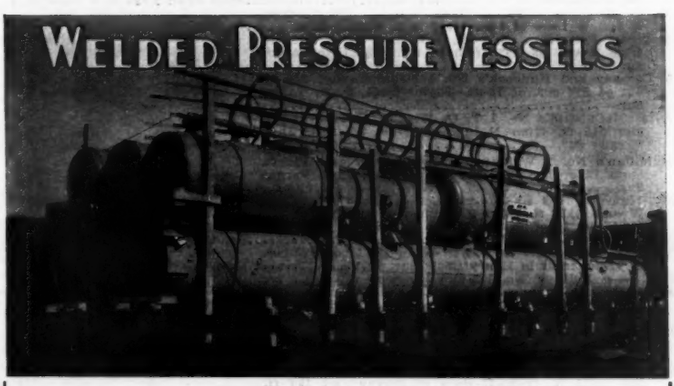

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Ray Martin et al's No. 1 Russell, 600 ft. from N and 150 ft. from E lines of lease in T. J. Martin Sur. ..Top sand 3,740 ft.; running tubing; T. D. 3,790 ft.

Marr et al's No. 1 Lowns, 1,200 ft. from most westerly E line and 3,150 ft. from S line of survey, W. G. Tuttle Sur. ..Derrick.

Mass and Tucker's No. 1 Matthews, 3,344 ft. from N, 4,356 ft. from E, Dalines Cartimas Sur. ..Shut down 3,310 ft.

H. C. McBride's No. 1 Sue Hale, 150 ft. from S and 150 ft. from W of Sue Hale 88-ac. tract, John Darley Sur. ..Set 12½-in. csg. 212 ft.

Frank Melat's No. 1 Newton Orr, 300 ft. S of N line of 202½-ac. tract, William Tippett Sur. ..Shut down 3,225 ft.

Nat Saddler's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. ..Shut down 1,985 ft.

Pitts et al's No. 1 Freeman, 1,000 ft. N of S line and 1,000 ft. E of W line of 181-ac. tract, J. Watkins Sur. ..Rig blew down.

Priest et al's No. 1 Mayfield, 155 ft. from N and W lines of 32-ac. lease in Daniel Clark Sur. ..Fishing 2,430 ft.

Rowe et al's No. 1 Maxwell, 855 ft. from E and 237 ft. from S of B. F. Maxwell 59-ac. tract, R. H. Pinney Sur. ..Derrick.

Shaheen and Keeler's No. 1 H. L. Griffin, 550 ft. from W and 2,000 ft. from S of survey, Juan Ximenes Sur. ..Derrick.

Suttles' No. 2 Holland, 156 ft. from N and 152 ft. from W of Holland 41.7-ac. tract, M. J. Prue Sur. ..Shut down 2,300 ft.

SMITH COUNTY

Adams and Berry's No. 1 T. O. Wright, 150 ft. from N line and 150 ft. from E line of Juan Vargus Sur. ..Shut down 1,150 ft.

Bailey Gaunce et al's No. 1 S. S. Cook, 150 ft. from S and 150 ft. from W of S. S. Cook 20-ac. tract in 160-ac. tract, Juan Vargus Sur. ..Shut down 2,350 ft.

Ben Banner's No. 1 Lee White, 925 ft. from E line and 1,200 ft. from N line of Abraham H. Scott Sur. ..Drlg. 2,000 ft.

Big Indian Oil Co.'s No. 1 Holland, 2,384 ft. from N and 1,446 ft. from E line of survey, Thomas Allen Sur. ..Drlg. 3,770 ft.

G. B. Bunte, trustee's No. 1 A. S. Jarvis, 150 ft. from S and 150 ft. from W of 267-ac. tract, Juan Vargus Sur. ..Rig up.

Bunte et al's No. 1 Atkinson, 1,000 ft. from S line and 1,000 ft. from N line of 330-ac. tract, Calloway Dean Sur. ..Derrick.

Roy I. Carter's No. 1-B T. O. Wright, 1,280 ft. from N and 1,050 ft. from E lines of Juan Vargus Sur. ..Location.

Rex Cannon et al's No. 1 Buella Meanss ..Derrick.

Central Oil & Gas Co.'s No. 1 T. O. Wright ..Drlg. 2,894 ft.

Cotton Belt Oil Co.'s No. 1 C. S. Jackson, 500 ft. from N and 600 ft. from W of 39.85-ac. tract, Henry Micklebrough Sur. ..Shut down 3,377 ft.

Deason Oil Co.'s No. 1 T. O. Wright, 1,440 ft. from N and 250 ft. from W of T. O. Wright 86-ac. tract, Juan Vargus Sur. ..Derrick.

East Texas Refining Co.'s No. 1 Colored Methodist Church, James Jordan Sur. ..Drlg. 2,408 ft.

Hancock and McCarthey's No. 1 J. C. Cross, 200 ft. from E of road and 200 ft. N of S line of survey on a 13-ac. tract, Burbridge Sur. ..Set 10-in. csg. at 72 ft.

John Hoosier et al's No. 1 W. T. Roberts et al, 300 ft. from N and 277 ft. from W lines of 13½ acres in the Juan Vargus Sur. ..Waiting on connection; T. D. 3,650 ft.

Imperator Oil Co.'s No. 1 I. M. Green, 140 ft. from S and 165 ft. from E line of Green 86.5-ac. tract, NW of Overton and N and a little E of Big Indian No. 1 Holland ..Shut down 3,210 ft.

H. H. Lemaster's No. 1 T. O. Wright, 150 ft. from N and W lines of 8-ac. tract in J. Vargus Sur. ..Derrick.

Magnolia Petroleum Co.'s No. 6 J. R. Wright, 2,400 ft. from E and 1,800 ft. from N of survey, Juan Vargus Sur. ..Drlg. 2,320 ft.

McCarthey and Hancock's No. 1 Nellie Taylor, 250 ft. out of SW cor. of 73-ac. Taylor tract, F. M. Taylor Sur. ..Derrick.

A. A. McCutchin's No. 1 T. O. Wright, 150 ft. from E and 315 ft. from N lines of 5-ac. tract in Juan Vargus Sur. ..Derrick.

McMillan's No. 1 Wright, 794 ft. from N and 171 ft. from W of T. C. Wright 86-ac. tract, Juan Vargus Sur. ..Top Austin 3,547 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 J. H. Sharp, 530 ft. W and 1,170 ft. from S of most northerly NE cor. 482.67-ac. tract in the M. De Los Santos Sur. ..Location.

Miller et al's No. 1 McDavid ..Spudded and shut down.

Morrison's No. 1 I. Roy, 330 ft. N and E from SW cor. of 87-ac. tract in Henry Cools Sur. ..Shut down 3,900 ft.

Phillips & Phillips' No. 1 Anna Morrison ..Set 10-in. csg. at 33 ft.

M. M. Rowand et al's No. 1 Gibbons, 1,800 varas from W and 260 varas S of river (which is N line of survey), J. M. Garcia Sur. ..Shut down 3,505 ft.

Ruffin and Williams' No. 1 Hamp Florence, 700 ft. from N and 300 ft. from E of 193.5-ac. tract, Barnes Clark Sur. ..Coring 3,965 ft.

Stanley Lewis', No. 1 T. O. Wright, 1,500 ft. from N and 1,275 ft. from E lines of survey and 150 ft. from S and W lines of 3.76-ac. tract, Juan Vargus Sur. ..Location.

Smith & Son's No. 1 S. S. Cooke, 1,875 ft. N and 231 ft. W from SW cor. D. Wright tract, Juan Vargus Sur. ..Derrick.

M. T. Smith & Son's No. 1 T. O. Wright, center of 10-ac. Wiley lease in Juan Vargus Sur. ..Top sand 3,690 ft.; set csg.; T. D. 3,700 ft.

Sun Oil Co.'s No. 2 J. B. Henson, 200 ft. from N line and 285 ft. from W line of 216-ac. tract, Juan Vargus Sur. ..Drlg. 1,147 ft.

Sun Oil Co.'s No. 2 J. H. Lane, 580 ft. W of No. 1 Samuel Dexter Sur. ..Coring 3,660 ft.

Sun Oil Co.'s No. 2 J. J. Denton, 250 ft. from N line and 425 ft. from E line of tract in the Juan Vargus Sur. ..Building derrick.

The Texas Company's No. 3 Blackwell, 330 ft. from S and E lines of 100-ac. tract in James Jordan Sur. ..Location.

The Texas Company's No. 1 J. W. Wilson, 250 ft. from W line and 600 ft. S of No. 1 D. Collins Sur. ..Preparing to spud.

The Texas Company's No. 2 J. W. Wilson, 527 ft. from most easterly W line and 350 ft. N of most southerly S line D. Collins Sur. ..Drlg. 1,452 ft.

Mrs. S. O. Thompson's No. 1 S. S. Cooke, center of 5-ac. tract and lease in James Jordan Sur. ..Top Austin 3,563 ft.

Tytex Oil Co.'s No. 1 Alex Weldert, 2,030 ft. from S and 525 ft. from E lines of Franklin T. Bodenheimer Sur. ..Derrick.

Vitex' No. 1 Irion, 150 ft. from S and E lines of 50-ac. tract in Mary Hughes Sur. ..Shut down 1,185 ft.

Yarber et al's No. 1 R. G. Wright ..Derrick.

TITUS COUNTY

H. V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ..Shut down 1,410 ft.

Joiner et al's No. 1 Clayton Brown ..Shut down 2,250 ft.

UPSHUR COUNTY

Arcadia Refining Co.'s No. 1 Victory, 3,200 ft. from W and 900 ft. from S lines of E. A. J. Evans Sur. ..Location.

Alma Petroleum Co.'s No. 1 J. W. L. Yount ..Rig up.

Barkley et al's No. 1 J. B. Webb, 330 ft. from SE cor. of 31-ac. lease on 76-ac. tract, G. W. Hooper Sur. ..Top Austin 3,636 ft.; set csg.

Brennan and Wood's No. 1 Robertson, center of Robertson 41ac. tract, Ira Stephenson Sur. ..Plugged back and shut down.

Cockrell et al's No. 1 C. A. Lee, 150 ft. from S and 150 ft. E of 26½-ac. tract, W. L. Palmer Sur. ..Derrick.

Callahan et al's No. 1 Lee R. Kay, 660 ft. from N and E lines of Charles O'Neal Sur. ..Derrick.

Calhoun et al's No. 1 J. R. Penn, 264 ft. from S line and E line of Penn 104-ac. tract, Joseph Manning Sur. ..Derrick.

Compton and Letts' No. 1 J. C. Wilsford, 300 ft. from E line and 2,700 ft. from S line of survey, L. Lomsollas Sur. ..Derrick.

Cole and Butler's No. 1 D. F. Guest, 300 ft. out of NE cor. of Guest 129-ac. tract and survey ..Derrick.

Daily Oil & Gas Co.'s No. 1 B. F. Phillips, 200 ft. out of SE cor. of 64-ac. tract, P. Whitestone Sur. ..Derrick.

Dumas et al's No. 1 A. O. Phillips, 150 ft. from N and 150 ft. from E of W 25.2-ac. of 75-ac. tract, S. Harrell Sur. ..Skid rig.

Glasscock et al's No. 1 C. C. Londera, 115 ft. from N and 130 ft. from E lines of 2.38-ac. tract in G. W. Hooper Sur. ..Location.

Home Oil Co.'s No. 1 F. D. Futrell, 150 ft. out of SW cor. and 520 ft. from E and 400 ft. from S line of 7.6-ac. tract, A. Lumbrara Sur., south of Gilmer ..Shut down 2,380 ft.

Humble Oil & Refining Co.'s No. 1 T. D. Smith, 1,956 ft. from S line and 330 ft. from W line of lease, Hayden Edwards Sur. ..Derrick.

Humble Oil & Refining Co.'s No. 1 E. O'Born, 1,326 ft. W and 1,625 ft. N of SE cor. of 300-ac. tract in Jose Pineda Sur. ..Location.

Humble Oil & Refining Co.'s No. 1 M. Mattox, 200 ft. from S and E lines of 61.6-ac. tract in J. Pineda Sur. ..Location.

Humble Oil & Refining Co.'s No. 1 J. W. Smith, 200 ft. from N and E lines of 86.5-ac. tract in the J. Pineda Sur. ..Location.

J. A. Johnson's No. 1 J. T. Miller ..Derrick.

A. D. King's No. 1 Lloyd, 156 ft. from N line of survey and 288 ft. from E line of 4-ac. tract, D. Sanches Sur. ..Derrick.

Lotts Bros. et al's No. 1 C. B. Jones, 200 ft. from N and 165 ft. from E lines of 50-ac. tract in the Henry W. Augustine Sur. ..Location.

Magnolia Petroleum Co.'s No. 6 J. W. Free, 800 ft. from N and 355 ft. from E lines of Block 6, G. W. Hooper Sur. ..Location.

Murphy et al's No. 1 J. Watkins, 330 ft. from S and 250 ft. from W lines of 22-ac. lease in J. Pineda Sur. ..Set 10-in. csg. 130 ft.

Magnolia Petroleum Co.'s No. 5 J. W. Free, 384 ft. from N and 330 ft. from E lines of 28.16-ac. tract in the G. W. Hooper Sur. ..Coring 3,644 ft.

Mary Ellen Oil Co.'s No. 1 J. W. Davis, 375 ft. from N and 425 ft. from W line of 215-ac. tract in J. Burleson Sur. ..Location.

McMahon and McCullough's No. 1 E. H. Hamilton, 200 ft. from E and 150 ft. from S of 88-ac. tract, M. Chandler Sur. ..Flowed for 2 hrs.; well now dead; T. D. 3,762 ft.

McPhail and Smith's No. 1 Kay, 660 ft. from S and 660 ft. from W line of J. Elliott Sur., 1½ miles S of Big Sandy ..Bailed dry; T. D. 3,655 ft.

Meade Bros.' No. 1 Woolford, 2,400 ft. from SE line and 1,250 ft. from NW line of survey, J. L. Lowery Sur. ..Location.

G. P. Mitcham's No. 1 J. B. Bland, 165 ft. from E and 650 ft. from S of 62½-ac. tract and 15-ac. lease, G. W. Hooper Sur. ..Drlg. 2,921 ft.

W. H. Peckham's No. 1 J. B. Webb, 450 ft. from S line and 1,450 ft. from E line of tract, G. W. Hooper Sur. ..Drlg. 3,230 ft.

Roeser-Pendleton's No. 1 E. C. Evers, 293 ft. from N and 150 ft. from W lines of lease in G. W. Hooper Sur. ..Drlg. 3,000 ft.

Smith Bros.' No. 1 J. W. Davis, 400 ft. from N and 800 ft. from W lines of S 200 acres of J. W. Davis 250-ac. tract in John Burleson Sur. ..Rigging up.

J. R. Smith's No. 1 J. B. Webb, 200 ft. N and 488 ft. W of SE cor. of W 20 acres of 71-ac. tract, G. W. Hooper Sur. ..Derrick.

Sorrels & Duffey's No. 1 J. W. Wooden, 200 ft. from E and 200 ft. S of survey, Isham Williams Sur. ..Shut down 1,445 ft.

Sun Oil Co.'s No. 1 Hargrove, 250 ft. from S and 330 ft. from E lines of 200-ac. tract in Marshall Mann Sur. ..Drlg. 2,300 ft.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out off NE cor. of Hubbard 225-ac. tract, 3¼ miles S of Canton, M. J. Cadena Sur. ..Spudded and shut down 300 ft.

Hart Petroleum Corp.'s No. 1 M. L. Cox, 1,785 ft. N of S line and 524 ft. E of W line of Cox 300-ac. tract in Nugent Headright Sur. ..Shut down 2,085 ft.

H. Helms et al's No. 1 Bogue, 647 ft. W and 155 ft. S of SE cor. of J. M. Brown 70-ac. in Marshall University Sur., SE of Van ..Shut down 3,098 ft.

Joiner et al's No. 1 J. S. Meeks, 330 ft. out of the NE cor. of the 330-ac. tract, A. Ducher Sur. ..Shut down 3,340 ft.

Humble Oil & Refining Co.'s No. 1 L. A. Dowdle, 1,027 ft. N of S line and 150 ft. E of W line, William Daniel Sur. ..Temp. abnd. 2,987 ft.

Kelly Oil & Gas Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..Shut down 2,590 ft.

Neil McMehory's No. 1 R. V. Murphy, 150 ft. from N and 150 ft. W of survey, H. Bailey Sur. ..Shut down 1,975 ft.

W. P. Palmer et al's No. 2 W. P. Forster, 600 ft. from N and 450 ft. from E of SW cor. of Forster 151-ac. tract in the F. Montgomery Sur. ..Shut down 3,000 ft.

W. A. Phillips et al's No. 1 Morris, 1,050 ft. S of N line and 350 ft. W of E line of center west of Norris 160-ac. tract in the C. L. Morris Headright Sur. ..Shut down 3,075 ft.

Pure Oil Co.'s No. 2 J. M. Martin, 675 ft. W of E lines and 225 ft. S of N line of lease, Mund Gross Sur. ..Drlg. 1,800 ft.

Pure Oil Co.'s No. 3 J. D. Miller, 314 ft. S of N line and 200 ft. W of E line of 60-ac. lease, John Walling Sur. ..Shut down 304 ft.

Van Oil Association's No. 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. ..Coring 2,350 ft.

WOOD COUNTY

Brennan and Wood's No. 1 L. W. Mings, 300 ft. from NW cor. of survey and tract, Moses Stripling Sur. ..Derrick.

Loche and Clack's No. 1 A. C. Pick, 165 ft. S of NE cor. G. C. Reeves 25-ac. tract, Daniel Fuller Sur. ..Shut down 2,008 ft.

Deep Rock Oil Co.'s No. 1 Maud Smith, center of Maud Smith S 40-ac. tract, L. Johnson Sur. ..Drlg. 4,408 ft.

Main Holding Co. and Thelma Wells' No. 1 Stewart, 1,988 ft. from NE and 2,898 ft. from E line of survey, E. Rehorse Sur. ..Shut down 465 ft.

Vitek Oil Co.'s No. 1 Rosa Bogel, 250 ft. from N and 500 ft. from W of survey, Sarah English Sur. ..Shut down 2,760 ft.

M. O. Walmer Oil Co.'s No. 1 J. A. Ivey, center of 57-ac. tract, 2 miles NE of Mineola, A. Hamilton Sur. ..Coring 4,007 ft.

Wood County Oil & Gas Co.'s No. 1 Ivy Davis, 180 ft. from S line of 160-ac. tract, Sarah McDonald Sur. ..Derrick.

Wood County Investment Co.'s No. 1 Ross ..Derrick.

Wood County Development Co.'s No. 1 E. L. Pritchett ..Derrick.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 26)

Pulse-Shell Pet. Corp.'s No. 1 Simpson, SE NE, Sec. 140, Blk. 3, L&G.N. Sur. ..... T.D. 3,255 ft.; top pay 3,220-55 ft.; 1,500 ft. oil in hole.; to shoot.

Saunders et al's No. 2 Sullivan, 822 ft. from W and 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, L&G.N. Sur. ..... T.D. 3,364 ft.; making 40 bbls. oil and some water; trying to exhaust water.

Sherwood's No. 1 Morse, 990 ft. N, 990 ft. W, NW, Sec. 15, Blk. A-9, H.&G.N. Sur. ..... Drlg. 1,200 ft.

Steckoll & Reiger's No. 1 Short, 330 ft. S and W, Sec. 17, B. E. Chaney Sur. ..... S.D. 3,052 ft.

Sullivan & Ochiltree's No. 1-A Morse, 330 ft. S and W, N½ NE, Sec. 15, Blk. A-9, H.&G.N. Sur. ..... Rig; elevation 2,686 ft.

Tarber's No. 1 Saunders, 330 ft. N and W, Sec. 3, Blk. 1, B.S.&F. Sur. ..... Location.

HUTCHINSON COUNTY

Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ..... Spudded and S.D.

Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 31, Blk. 46, H.&T.C. Sur. .. S.D. 450 ft.

Huber Prod. Co.'s No. 1 Johnson Bros. (Premier), 330 ft. N and E of W 60 ac., N 80 ac., NW, Sec. 3, Blk. Y, A.&B. Sur. ..... S.D. 3,016 ft.

Skelly Oil Co.'s No. 1 Johnson Bros., 660 ft. S and W, SE, Sec. 30, Blk. Y, A.&B. Sur. ..... S.D. 3,115 ft.

Timms-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, L&G.N. Sur. ..... Rig.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... T.D. 5,003 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch ..... Small S.O. 1,133-40 ft.; S.D. 4,-167 ft.

MOORE COUNTY

Interstate's No. 1 Nield, C NE, Sec. 18, Blk. 44, H.&T. C. Sur. ..... Location.

Magnolia Pet. Co.'s No. 1 Jones, 330 ft. N, 330 ft. E, Sec. 170, Blk. 3-T, T.&N.O. Sur. ..... Running 5-in. csg. 3,330 ft.

Pollard et al's No. 1 Hall, 330 ft. S and E, NE, Sec. 131, Blk. 3-T, T.&N.O. Sur. ..... Rig on ground.

Sunray Oil Co.'s No. 1 Rupert, 660 ft. N, 330 ft. E, NW, Sec. 191, Blk. 3-T, T.&N.O. Sur. ..... T.D. 3,380 ft., 650 bbls. oil and 700 bbls. water per day.

Sunray Oil Co.'s No. 2 Jones, 330 ft. N and W, W½ SW, Sec. 164, Blk. 3-T, T.&N.O. Sur. ..... Rig on ground.

Texas Interstate P. L. Co.'s No. 1-23 Thompson, C N½ NE, Sec. 23, Blk. 44, H.&T.C. Sur. ..... Location.

Texas Interstate P. L. Co.'s No. 1-37 Sneed, C NW, Sec. 37, Blk. 6-T, T.&N.O. Sur. ..... Location.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur. ..... S.D. 400 ft.

Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. 8, G.C.&S.F. Sur. ..... S.D. 1,005 ft. for csg.

POTTER COUNTY

Red River Gas Co.'s No. 6-A Bivins, 1,344 ft. S, 1,089 ft. W, SE, Sec. 37, Blk. M-20, G.&M. Sur. ..... Rigging up.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur. ..... S.D. 900 ft.

Travis et al's No. 1 Cunningham, 330 ft. S and W, Sec. 74, Blk. M-2, H.&G.N. Sur. ..... S.D. 2,690 ft.

WHEELER COUNTY

Clarity et al's No. 1 Porter, 330 ft. S and W, SE, Sec. 2, Blk. A-9, H.&G.N. Sur. ..... S.O. 1,960 ft; S.D. 2,005 ft.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 26)

ECTOR COUNTY

Weekly Oil Corp. et al's No. 1 Cowden, 1,980 ft. from N and W Sec. 33, Blk. 43, Twp. 2s, T.&P. Sur. ..... Location.

H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G.M. M.Br.&A. Sur. ..... Shut down 3,275 ft.

EL PASO COUNTY

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.F. No. 7,247 ..... Drlg. 1,635 ft.; show oil and gas 1,620-35 ft.

FISHER COUNTY

Cranfill & Reynolds' No. 1 George, 400 ft. from N and 380 ft. from E, Sec. 200, Blk. 1, B.B.&C. Sur. ..... Bldg. rig.

The Texas Company's No. 1 B. H. Barnham, 357 ft. from S and 330 ft. from W lines of Sec. 194, Blk. 1, B.B.&C. Sur. ..... Location.

GAINES COUNTY

Texas Consolidated Oil Co. et al's No. 1 Jones, 2,310 ft. from NE Sec. 4, Blk. A-8, P.S.L. Sur. ..... Total depth 4,630 ft.

GARZA COUNTY

Pandem Oil Corp.'s No. 1 Justice, 330 ft. from S and W of Sec. 12, Blk. 4, H.&G.N. Sur. ..... Spudded and shut down.

Penny & Posey's No. 1 Justice, 1,980 ft. from S and 1,650 ft. from E of Sec. 25, Blk. 6, H.&G.N. Sur. (3,500-ft. cable tool test) ..... Total depth 3,302 ft.

HOWARD COUNTY

Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W Sec. 14, Blk. 20, Twp. 1s, T.&P. Sur.. Spudded and shut down.

Merrick & Lamb's No. 2 Chalk, 990 ft. from the N and W lines of Sec. 125, Blk. 29, W.&M.W.R.R. Sur. .... Location.

IRION COUNTY

Davis et al's No. 1 Suggs, 1,560 ft. from S and 925 ft. from W Sec. 3,081, Blk. 28, H.&T.C. Sur. ..... Total depth 2,152 ft.; underreaming 10-in. casing.

Denny & Andrews' No. 1-A Tankersley, 200 ft. from S and 2,000 ft. from E of Sec. 709, J. P. Imhoff Sur. ... Shut down 250 ft.

Ellis et al's No. 1 Nutt, 1,350 ft. from N and 450 ft. from E of Sec. 694, Kheikenholm Sur. ..... Drlg. 1,485 ft.

Stanolind Oil & Gas Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. ..... Cleaning out on bottom; total depth 5,950 ft.

Straughn & Texannati Oil Co.'s No. 1 Tankersley, 150 ft. from S and 750 ft. from W of Sec. 4, Gonzales County School Land ..... Total depth 1,506 ft.; plugged back to 1,220 ft.

Straughn & Adkins Bros.' No. 1 Lee, 1,080 ft. from W and 420 ft. from N of Sec. 739, C. Kaiser Sur. ..... Drlg. 675 ft.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 43.4-acre tract in G. Martinez Sur. ..... Shut down 1,005 ft.

LOVING COUNTY

Ervin & Mahres' No. 1 Thrope, 2,310 ft. from E and 330 ft. from S Sec. 46, Blk. 53, T.&P. Sur. ..... Shut down 810 ft.

Slack's No. 1 Lynd, 990 ft. NE and 330 ft. SE of Sec. 3, Blk. 2, W.&N.W. Sur ..... Shut down 400 ft.

Eppenauer et al.'s No. 1 Johnson, 330 ft. from NW and SW of Sec. 86, Blk. 1, W.&N.W. Sur. ..... Drlg. 3,705 ft.

Falbe & Evans' No. 1 Dean, 330 ft. from NE and 990 ft. from NW Sec. 79, Blk. 33, H.&T.C. Sur. ..... Shut down 2,500 ft.

Lewis & Slagel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W Sec. 6, Blk. 56, Twp. 1, T.&P. Sur... Spudded and shut down.

Lockhart & Co.'s No. 2 Bowen & Wells, 330 ft. from NE and SE of Sec. 92, Blk. 1, W.&N.W. Sur. ..... Shut down 3,385 ft.

Martin et al's No. 2 Ramsey, 990 ft. from SE and 2,310 ft. from SW Sec. 83, Blk. 1, W.&N.W. Sur. ..... Shut down 4,080 ft.

Slagel Drlg. Co.'s No. 1 Cartwright et al, 2,310 ft. from S and 990 ft. from W Sec. 1, Blk. 57, Twp. 1, T.&P. Sur. ..... Total depth 3,182 ft.; placed on pump after pumping water off; well made a 5-bbl. head of oil Aug. 9, pumping into pit.

Tennant et al's No. 1 Martin, 990 ft. from NW and SW Sec. 66, Blk. 1, W.&N.W. Sur. ..... Shut down 1,400 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor. Sec. 132, E.L.R.R. Sur. ..... Shut down 2,860 ft.

PECOS COUNTY

Dittman's No. 1 Sanford, 330 ft. from NW and 1,650 ft. from NE of Sec. 55, Blk. 10, H.&G.N. Sur. ..... Moving in material (standard).

Slaughter et al's No. 1 Sun Yates, 60 ft. S of Sun Oil Co.'s No. 1 Yates, Sec. 59, Blk. 1, I.&G.N. Sur. ..... Location.

REEVES COUNTY

Cunningham et al's No. 1 Wright, 1,320 ft. from S and W Sec. 58, Cassel's Sur. ..... Spudded and shut down.

Humble Oil & Ref. Co.'s No. 1 Bolmorhea Livestock Co., 1,320 ft. from N and 1,320 ft. from W Sec. 33, Blk. 5, H.&G.N. Sur. ..... Drlg. 4,770 ft.; top sand 4,684 ft.

James & Milton's No. 1 Patterson ..... To straightream; total depth 1,-600 ft.

Lee O. White et al's No. 1 Hershersor, 330 ft. from N and W lines of Sec. 5, Blk. 51, Twp. 10, T.&P. Sur. ... Shut down 5,044 ft.

RUNNELS COUNTY

Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 519 ..... Shut down 2,398 ft.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... Drlg. 3,105 ft.

Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,362 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... Waiting on cement to set; cem. 8¼-in. casing at 4,063 ft.; pay at 4,000 ft. cased off.

George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ..... Shut down 5,053 ft.

SCURRY COUNTY

G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... Shut down 5,100 ft.

Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W Sec. 68, Blk. 3, H.&G.N. Sur. ..... Spudded and shut down.

Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... Shut down 3,500 ft.

Simon & Brock et al's No. 1 Cruse, 2,310 ft. from S and E Sec. 119, Blk. 97, H.&T.C. Sur. ..... Show oil 1,798, 1,820, 1,850 ft.; shut down 2,500 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.-K.-T. Sur. ..... Shut down 2,669 ft.

Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... Shut down 3,150 ft.

Miller Bros.' No. 1 Allison & Burke, C NW cor. Sec. 10, Blk. 176, T.&P. Sur. ..... Shut down 120 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S Sec. 26, Blk. 161, G.C.&S.F. Sur... Shut down 6,120 ft.

Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... Shut down 2,545 ft.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Norsworthy, 2,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... Shut down 760 ft.; show oil and gas 725 ft.

Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur. ... Shut down 1,994 ft.

Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... Shut down 200 ft.

UPTON COUUNTY

Cosby Prod. & Roy. Co.'s No. 1 Lane, 2,310 ft. from S and 1,650 ft. from W, Sec. 36, Blk. 1, M.-K.-T. Sur. .. Moving in material.

Rankin et al's No. 1 Cordova Union Land, 660 ft. from N and E Sec. 6, G.C.&S.F. Sur., 1¼ miles S of Rankin ..... Shut down 2,518 ft.

VAL VERDE COUNTY

Independent Operators' No. 1 Whitehead, SE SE Sec. 10, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... Shut down 5,420 ft.

O. O. Owehs' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... Shut down 6,780 ft.

WARD COUNTY

Bradford et al's No. 1 Carson, 990 ft. from NE and SE Sec. 26, Blk. 5, H.&T.C. Sur. ..... Making estimated 5,000,000 ft. gas; total depth 2,195 ft.

Bradford & Abell's No. 2 Boogher, 1,160 ft. from NW and 800 ft. from SW Sec. 11, Blk. 5, H.&T.C. Sur. ... 300 ft. oil in hole; shut down 2,260 ft.; 300 ft. oil in hole; top pay 2,195 ft.

Bradford's No. 1 York, 330 ft. from NE and SE of Sec. 10, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,490 ft.; top pay 2,285 ft.; 1,800 ft. oil in hole.

Beckley et al's No. 1 Johnson, 4,140 ft. from NE and 990 ft. from SE Sec. 8, Blk. 32, H.&T.C. Sur ..... Shut down 2,240 ft.; to run tubing.

Boogher's No. 1 fee, 235 ft. from SE and 3,553 ft. from NE Sec. 11, Blk. 5, H.&T.C. Sur. ..... Drlg. 1,250 ft.

Buster Black's No. 1 Hall & Roberts, 990 ft. from NE and 1,650 ft. from NW Sec. 17, Blk. 33, H.&T.C. Sur... Shut down 1,800 ft.

Central Oil & Gas Co.'s No. 1 Barrow, 330 ft. from NW and 1,263 ft. from SW Sec. 55, J. W. Jackson Sur. ..... Fishing 1,960 ft.

H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW Sec. 12, Blk. 5, H.&T.C. Sur. ..... Spudded and shut down.

Gulf Prod. Co.'s No. 8 O'Brien, 2,310 ft. from S and 330 ft. from W lines of Sec. 194, Blk. 1, B.B.&C. Sur... Shut down 540 ft.

Hankinson et al's No. 1 Emery, 3,090 ft. from SE and 510 ft. from SW Sec. 26, Blk. 5, H.&T.C. Sur. ..... Shut down 2,238 ft.

Moran & Miles' No. 1 Boogher, 3,603 ft. from NE and 1,303 ft. from SE Sec. 11, Blk. 5, H.&T.C. Sur. ..... Shut down 530 ft.

R. F. Owens' No. 1 Lee, 1,344 ft. from NW and 4,533 ft. from SW Sec. 1, J. Howe Sur. ..... Rigging up standard tools.

Peck & Fuglar's No. 1 Merritt, 3,063 ft. from NE and 1,698 ft. from SE Sec. 11, Blk. 5, H.&T.C. Sur. ..... Shut down 885 ft.

Rector Oil Co.'s No. 1 Smith, 1,320 ft. from N and E, Sec. 22, Blk. A, G.M.M.B.&A. Sur. ..... Shut down 3,602 ft.

Rexford et al's No. 2 Johnson, 2,300 ft. from SE and 4,450 ft. from NE Sec. 11, Blk. 5, H.&T.C. Sur. ..... Drlg. 425 ft.

Paul Ryan et al's No. 1 J. S. Reynolds, 4,110 ft. from NE line and 150 ft. from NW line, Sec. 12, Blk. 5, H.&T.C. Sur. ..... Location.

Shipley et al's No. 5 Hayzlett, 2,490 ft. from SE and 1,980 ft. from SW Sec. 17, Blk. 5, H.&T.C. Sur. ..... Shut down 2,507 ft.

Shipley et al's No. 1 Monroe, 330 ft. SE SW Sec. 3, Blk. 1 ..... Shut down 4,545 ft.

Sturm & Simms Oil Co.'s No. 1 Jones, 2,310 ft. from NE and 330 ft. from SE Sec. 25, Blk. B-29, P.S.L. Sur. ... Drlg. 1,517 ft.

White et al's No. 1 Burtner, 150 ft. from NE and 515 ft. from SE of Sec. 8, Blk. 32, H.&T.C. Sur. ..... Shut down 755 ft.

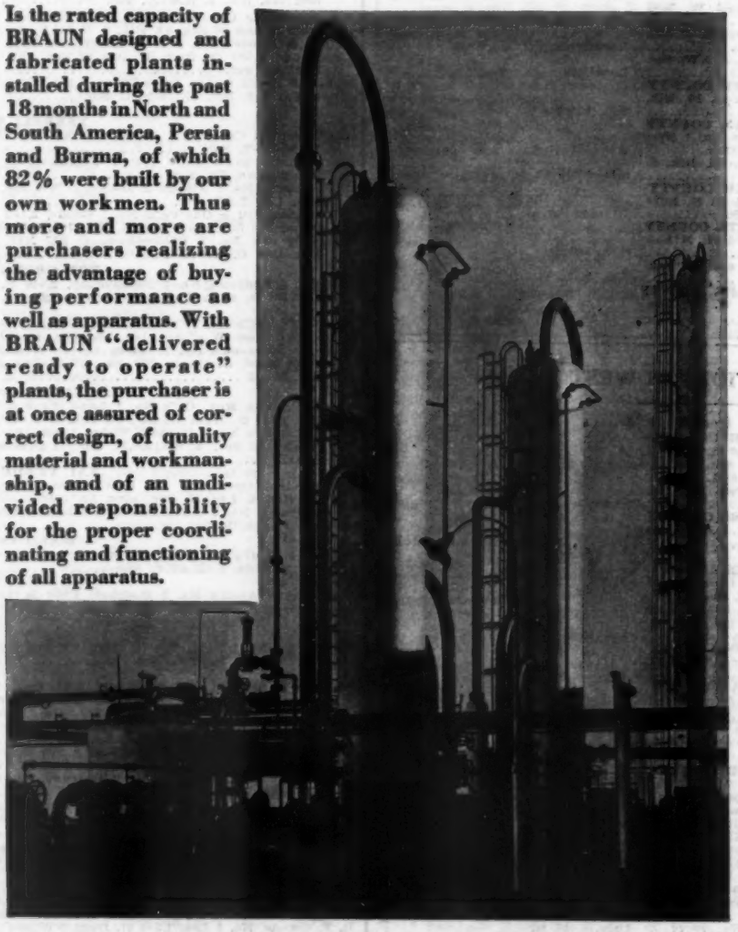
WINKLER COUNTY

Liner Drlg. Co.'s No. 1 Campbell, 350 ft. from N and E cor. Sec. 2, Blk. B-5 ..... Shut down 4,640 ft.

Braun
VAPOR RECOVERY PLANTS

895,000 GALLONS OF GASOLINE PER DAY

Is the rated capacity of BRAUN designed and fabricated plants installed during the past 18 months in North and South America, Persia and Burma, of which 82% were built by our own workmen. Thus more and more are purchasers realizing the advantage of buying performance as well as apparatus. With BRAUN "delivered ready to operate" plants, the purchaser is at once assured of correct design, of quality material and workmanship, and of an undivided responsibility for the proper coordinating and functioning of all apparatus.



C. F. BRAUN & CO., INC.
ALHAMBRA, CALIFORNIA
NEW YORK , CHICAGO , TULSA , HOUSTON , LONDON

Brief Items for Petroleum Refiners

Refiners in East Texas Organize New Association

The East Texas Independent Refiners Association was formed in Dallas in the past week for the purpose of providing means of supplying crude and protecting the marketing of the new industry there. Eugene Constantin of the Constantin Refining Co. was chosen president of the association with G. L. Rowsey of the Taylor Refining Co. and Joe Danciger of the Danciger Oil & Refining Co. as vice presidents. E. F. Griswold of the Central Refining Co. is secretary and treasurer.

The organization of the new association followed closely the order to shut in the East Texas Field. Most of the refiners in this area did not have a large supply of crude and several of them have been forced to shut down their plants.

The East Texas Refining Co.'s plant at Frairs Switch has a supply of crude to run the refinery for 10 days longer, while the company's larger plant at Longview has already been shut down for lack of crude. The latter plant has been depending more on oil direct from the field, piped by a 4-inch and a 6-inch line, whereas the former plant has had crude in storage.

The Taylor Refining Co. has enough crude in storage to run it until September 7 at the rate of 10,000 bbls. per day.

J. D. Wrather, head of the Overton Refining Co.'s plant at Overton and the Kilgore Refining Co.'s plant at Kilgore stated that his plants had only enough to keep them running for a few days.

The Central Refining Co. has shut down its plant at Friars Switch, and the Rusk County Refining Co. has shut down its plant at Overton.

The Constantin Refining Co., which started processing crude on August 12, is also shut down. The Beacon Oil & Refining Co.'s plant north of Henderson is likewise shut down.

The Arrow Refining Co. at Overton has about 46,000 bbls. in storage, enough to keep its 2,500-bbl. plant running about 18 days.

SOUTHERN REFINERS ARE AGAINST RATE ADVANCE

WASHINGTON, D. C., Aug. 24.—Refiners and marketers in the southeastern states gave their objections to a general freight rate advance on petroleum products which is now pending, but warned that should an advance be granted, they would not be obligated to haul their products by rail.

The Standard Oil Co. of Kentucky, through A. M. Stephens, its traffic manager, expressed the opinion that the increase would cause disruption of rate differentials and rate relationships in the southern states, where the company has its principal markets.

"I can speak with authority only for the Standard Oil Co. of Kentucky," declared Mr. Stephens, "but I do know that many of the major branches of the industry at large are indifferent to the ultimate effect of the 15 per cent proceedings, since they appear to have a permanent remedy in their hands against the ill effects of the percentage increase in petroleum rates."

The witness explained that he referred to competing forms of transportation.

Mr. Stephens testified that, even assuming that petroleum traffic would continue to move under any rate adjustment, his company was "unalterably opposed" to the percentage method of advancing rates, since it tended to distort and destroy community-rate relationships.

SHELL COMPLETES PIPE LINES FOR EXPANSION OF REFINERIES

HOUSTON, Tex., Aug. 24.—Shell Pipe Line Co. has completed its new 10-inch pipe line from the East Texas Field to the refinery of the Shell Petroleum Corp. at Deer Park, east of Houston, on the Houston Ship Channel. Although East Texas at present is shut down the company has stored oil in East Texas which is being moved through the line. The line has a daily capacity of 40,000 to 45,000 bbls. daily.

The last gap in the line was completed Saturday with the successful crossing of the ship channel to the refinery, which is on the south side. The crossing, necessitating laying a 500-foot section, was made without a hitch. Shipping on the channel was closed for a period of four hours while the section was dragged across and welded in place.

This crossing, however, is only temporary, the pipe being laid on the bottom of the channel, and as soon as possible a permanent crossing will be made with the pipe placed 15 feet under the bed as required.

At Deer Park the line has been tied into the company's trunk line from West Texas. By reversing the flow of that line, East Texas oil can be pumped to Chicago by way of West Texas and the company's line to Oklahoma. In West Texas Shell also has considerable concrete storage to which East Texas crude can be run.

Shell has been moving a large volume of East Texas oil by tank car to Houston from where it has been shipped by tanker. Just before the shutdown went into effect it was reported the company had 14 tanks on the way to Houston to lift out this oil.

It is also reported here that the Shell interests will shortly start construction of a refinery along the East Coast. It is understood that the plant will be located at Bayonne, N. J., where the Standard Oil Co. of New Jersey, Tide Water Oil Co. and the Gulf Refining Co. have large refineries. The crude supply for the new plant would come from the pipe lines having terminals here and also from South America.

PLANT AT SOUTHPORT, LOUISIANA OPERATING

The Southport Refining & Export Co., a newly organized company, has started operating a 4,000-bbl. skimming plant at Southport near New Orleans, La. The company has reconditioned a plant which had been shut down for several years and has taken a 20-year lease on the plant and site.

The Southport company was organized by Tulsa oil men who are associated in the ownership and management of the Looboyle Refining Co., a marketing company, with headquarters in that city. Cornelius Kroll is president and general manager of the Southport company; P. J. Kroll, vice president and salesmanager; N. H. Talbott, secretary and Selig Aaronson, treasurer.

Crude oil is obtained by tank car from the East Texas fields. The company will sell products both for export and domestic movement. In the domestic end sales will be confined to shipments east of the Mississippi River and south of the Ohio River.

ORANGE PLANT OPERATING

HUNTINGTON BEACH, Calif., Aug. 22.—The Orange County Refining Co., in the West Newport district, has resumed operations after being idle for several months. Independent oil operators of the Huntington Beach oil field desiring a market for their crude, are reported to be supporting the movement to operate the refinery.

START SAN ANGELO PLANT

The Concho Refining Co. located at San Angelo, Tex., is making final connections and will start running crude through the stills this week. This plant will use both Irion County and Coleman County crude, which will be shipped in by tank car. The capacity of this plant will be 300 bbls. daily. Mr. Joe Sanger is president, R. D. Lavery, vice president, and Harry J. Earls, secretary-treasurer.

BUYS O-BAR PLANT

A deal has just been consummated in Coleman, Tex., whereby D. P. Rockmaker became owner of the Duke Baird interest in the O-Bar refinery. Mr. Rockmaker will be associated with L. L. Shield, T. E. Brown and Howard Samuel.

EASTERN REFINERS TO INCREASE OPERATIONS

To meet the requirements of refiners in eastern states the Pennsylvania Grade Crude Oil Conservation Board has authorized a 10 per cent increase in the crude oil production of fields producing Pennsylvania grade crude oil. The action was taken last week at a meeting held at Pittsburgh.

The new agreement among the producers which was effective immediately permits production of 60 per cent of that produced in April, 1930, in the Bradford and Allegany Fields and 80 per cent in all other Pennsylvania grade fields. The new order is effective until next month.

Forrest D. Dorn, Bradford, chairman of the board, said the increase was due mainly to an increased demand for Pennsylvania grade lubricants, especially from export buyers. A statement issued after the meeting said sentiment there indicated a general improvement in the condition of the oil industry, with a substantial increase in foreign trade.

Success in the proration plan was ascribed to the efforts of producers in the Bradford and Allegany Fields. "If these two major fields of the Pennsylvania grade area had not kept their production in line with the demand," the statement said, "the situation in the Pennsylvania grade area would have been in much more depressing state than it has been. All districts, by co-operating to the fullest extent with the Pennsylvania Grade Oil Conservation Board forced the draft on their stocks by limiting production. The success of their efforts is evident."

RESUME OPERATIONS

TITUSVILLE, Pa., Aug. 22.—The Pennsylvania Refining Co. plant located here has resumed operations as a result of the improved refinery market. This was formerly operated by the American Oil Works, the new company having purchased the plant months ago but had not operated it for several months.

NEW MONTREAL REFINERY

CHATHAM, Ontario, Aug. 22.—The new refinery of the British-American Oil Co. in Montreal is expected to be in operation toward the end of August. The plant will embody a number of innovations and improvements in cracking.

Plan Refineries For France With Large Capacities

When all the refineries now under construction and those projected in France are completed there will be a total capacity of between 3,000,000 to 4,000,000 tons of crude oil yearly according to a report of the American Chamber of Commerce at Paris. This is equivalent to approximately 25,000,000 bbls. of crude oil or 68,000 bbls. daily. This will exceed the capacity required to furnish all the gasoline needed in France for domestic consumption.

Accoding to the report there are now three refineries operating in France. Their names and capacities in tons yearly are as follows:

Courchelettes — Societe Generale des Petrole (Anglo-Persian group), 200,000 tons.

Pechelbronn—Societe de Pechelbronn, 100,000 tons.

Petit Couronne—Societe Jupiter (Royal Dutch), 250,000 tons.

The following refinery projects are listed:

Bec d'Ambes—Societe des Raffineries de la Gironde, 300,000 tons.

Berre—Compagnie des Produits Chimiques et Raffineries de Berre, 400,000 tons.

St. Marc (Brest)—Pechelbronn; Brest—Brest Port Petrolier, 300,000 tons.

Donges (St. Nazaire)—Consommateurs de Petroles.

Dunkerque—Raffineries de Petrole du Nord (Petrofina), 300,000 tons.

Frontignan—Compagnie Industrielle des Petroles, 100,000 tons.

Gonfreville and Martigues—Compagnie Francaise de Raffinage, 500,000 tons.

Lavera (B.-du-R.)—Societe Generale des Huiles de Petrole (Anglo-Persian).

Pauillan—Ste Jupiter (Anglo-Persian).

Port Jerome (S. I.)—Ste Franco-Americaine de Raffinage (Standard Oil).

Port Jerome—Vacuum Oil Co., 500,000 tons.

Importations of Products

In accordance with the official authorizations, the importations of petroleum products into France, comprising crude oil, gasoline, heavy oils and gas oils, indicate for the 1931 period a total of 2,832,250 tons, as compared with 3,107,040 tons for the 1929-30 authorized period.

These authorizations are accorded, prorata, to the following 11 companies or groups, in the percentages indicated, applying to the 1931 period:

Societe Franco-Americaine de Raffinage (Standard Oil group), 20.40 per cent.

Societe des Petroles Jupiter (Royal Dutch), 14.92 per cent.

Societe Generale des Huiles de Petrole (Anglo-Persian), 8.93 per cent.

Vacuum Oil Co. and Compagnie Industrielle des Petroles, 7.52 per cent.

Compagnie Francaise de Raffinage, 19.86 per cent.

Societe de Pechelbronn, 3.87 per cent.

Raffinerie des Petroles du Nord (Petrofina), 5.93 per cent.

Les Consommateurs de Petrole, 0.79 per cent.

Compagnie des Produits Chimiques et Raffineries de Berre, 7.86 per cent.

Raffineries de Petrole de la Gironde, 5.74 per cent.

Brest Port Petrolier, 4.18 per cent.

MAY BUILD PLANT

C. A. Edwards and associates, of Louisville, Ky., are planning the construction of a small skimming plant near Evansville, Ind. The plant will have a capacity of 250 bbls. daily. The Santa Fe Oil Co., of Tell City, Ind., will be associated with Mr. Edwards in the plant.

JAMES E. O'NEIL, FORMER PRAIRIE OIL & GAS HEAD, DIES IN FRANCE

James E. O'Neil, for many years president of the Prairie Oil & Gas Co. and one of the outstanding leaders in the oil industry, died in Cannes, France, Sunday, August 23, after a long illness. Mr. O'Neil resigned his position at the head of the Prairie organization on September 11, 1923, and shortly afterward went to France, a country he had often visited when he wanted a rest from his exacting duties.

Mr. O'Neil was born in Titusville, Pa., in 1867. He received his education in the schools of his native city and after a very short period spent in a Titusville printing office, he went to work as a water boy on a pipe line construction gang. He was a strongly built lad and was soon put to work at other jobs on the construction work. At the age of 19 he was sent to the Bradford Field by Pew & Emerson and made foreman of their leases compriaing 60 wells. When these properties were purchased by one of the Standard Oil Co. subsidiaries Mr. O'Neil was transferred to Ohio as a district foreman for the Ohio Oil Co. under William Fleming. He worked himself up to the position of general superintendent of the Ohio Oil Co. In 1905 Mr. O'Neil was

James E. O'Neil

sent to Kansas as vice president of the Prairie. In 1911 he became president of the company, which position he held for 12 years, or until his resignation.

When Mr. O'Neil joined the Prairie Oil & Gas Co. there was little oil produced in Kansas and less in the Indian Territory. The production of the two states in 1905 averaged only 33,000 bbls. per day. The company itself was a relatively small one but it was the leading purchaser of oil in Kansas and the Territory. Under his management it retained itse leadership and in addition was always among the foremost as a producing company extending its operations to many counties in the two States and into Texas.

The Prairie Pipe Line Co. which was a division of the Prairie Oil & Gas Co. until it was made a separate company in 1915 was built up until its lines extended from the Gulf Coast to the Mississippi River.

During America's part in the World War Mr. O'Neil was a member of the Petroleum War Service Committee and worked very hard to keep the United States and its allies supplied with oil. It is said that the strain undergone in this service had much to do with undermining his health.

Mr. O'Neil's retirement from business had been urged on him by his family and physicians for several years prior to the time of his actual retirement because of the serious condition of his health.

The news that James E. O'Neil had resigned as president of the Prairie Oil & Gas Co. caused a sensation in the Mid-Continent Field where his influence had been mostly felt. Thousands of oil men personally knew Mr. O'Neil, and all admired him for his agreeable manner and his democratic ways. He was acknowledged by all to be one of the real leaders in the industry, but from his high place he appreciated the ups and downs which oil producers must undergo in the conduct of their hazardous business and endeavored always to look after the interest of the operators from whom his company purchased crude oil, and in turn Mr. O'Neil had the confidence and esteem of the producing fraternity.

Mrs. O'Neil and one son and two daughters, as well as two sisters and several grandchildren survive. A younger brother, George, died very recently in Tulsa.

NEW JERSEY-CALIFORNIA MERGER NEGOTIATIONS

SAN FRANCISCO, Calif., Aug. 22.—Negotiations looking toward a consolidation of the Standard Oil Co. of California and Standard Oil Co. of New Jersey into a $2,400,000,000 concern are under way. K. R. Kingsbury, president of the California concern, and W. C. Teagle, president of the New Jersey company, and certain of their associates are meeting at Lake Tahoe seeking an acceptable plan. It is understood that auditors of the New Jersey company have been going over the books of the local firm for three weeks.

The negotiations are a resumption of the discussions two years ago but suspended pending some indication of the attitude the United States Government would take. This was furnished when the administration decided against testing the legality of the consolidation of Standard Oil of New York and Vacuum. It has been believed here, however, that the New Jersey company would acquire the Standard Oil companies of Ohio and Kentucky to consolidate its refining and marketing organization east of the Mississippi before resuming its discussions with the California company.

An official statement by the Standard of California, says:

"Resuming discussions tentatively initiated more than two years ago, W. C. Teagle, president of Standard Oil Co. (New Jersey), and K. R. Kingsbury, president of Standard Oil Co. of California, with certain of their associates, are now meeting at Lake Tahoe, Calif. The purpose of the meeting is to consider whether a mutually acceptable plan for the merger or consolidation of the two corporations can be reached."

WASHINGTON, D. C., Aug. 24.—The Department of Justice will inquire into the proposed mergers of the Standard Oil companies of New Jersey and California and into the proposed merger of the Sinclair Consolidated Oil Corp., Prairie Oil & Gas Co., Prairie Pipe Line Co., Tide Water Associated Oil Co. and the Rio Grande Oil Co. to determine whether antitrust laws are being violated.

Department of Justice officials refused to discuss whether or not any violations were involved in the present cases, but stated that the usual action taken by the Government in the cases of large mergers would be followed in this case. It is pointed out that the decision of the St. Louis court in the Socony case does not bar further litigation under a charge of violation of the Sherman law. That case was decided purely on the question of whether the decree which dissolved the original Standard Oil was violated.

DEATH OF NETTIE M. SLATT

DENVER, Colo., Aug. 24.—Nettie M. Slatt, who has been in charge of the Hills Dome Lease Development in the Watkins district, Colorado, died in Denver the past week.

UNIT PLAN WILL BE TRIED ON TWO BLOCKS OF EAST TEXAS ACREAGE

By L. G. E. Bignell
Petroleum Engineering Editor

As the larger oil companies have become more and more interested in production in the vast East Texas Field it has been made evident that it would be quite desirable to develop their leases upon some kind of unit plan that would limit cost of drilling, and probably reduce production costs, and at the same time permit the area to be opened up in an orderly manner and the oil produced as the market conditions demand.

It has long been recognized by petroleum engineers, production men and executives that the best possible means of securing maximum efficiency in developing and producing an oil pool is by placing as much acreage as possible under unit control, and this general fact has long been recognized as very applicable to the East Texas Field. It has not been considered possible to secure complete unitization of this great area but it is known that this ultimate condition is not really essential there because of the variable sand conditions and the possibility of operating relatively small blocks of acreage in an efficient manner if placed under unit control.

Sometime before the special session of the Texas legislature was called a movement was started to bring about these desired conditions and engineers familiar with unitization of other pools were called into consultation with the operators having holdings in East Texas and tentative plans were outlined.

Because of the meeting of the Texas legislature it was deemed advisable to hold matters in abeyance to learn what developments would come out of the special session and it was hoped that new laws might be enacted that would permit unitization without conflict with the antitrust laws of Texas.

A bill for this purpose was actually drafted and submitted to the attorney general of Texas for his opinion. The opinion of many attorneys for the oil companies led to the conclusion that there might be some conflict with antitrust laws of Texas if companies attempted to unitize their holdings after development had been started, but they do not go so far as to actually advise against anything of this kind being attempted.

As a matter of fact the Van Pool, in Van Zandt County, Texas, is now, and has for some time, been operated as a unit and no action has been taken by the State to prevent its being handled in this manner, and it therefore would seem that the oil from a pool may be extracted under properly organized unit operation plans.

With this condition established the major companies have gone ahead with their general plans and have succeeded in interesting many of the holders of large blocks of acreage in the East Texas Field in the unit plan idea. Some companies have been definitely opposed to such a plan and have so expressed themselves to the steering committee that has been handling this matter.

At one time the plan under consideration involved about 55,000 acres of leases in the East Texas Field that could be divided into seven blocks or units each to be handled in the best manner possible to develop them with the minimum number of wells and produce the oil at the lowest possible cost.

The preliminary survey of the situation developed the fact that a large amount of money could be saved in drilling costs by so spacing wells as to secure the drainage of maximum areas of oil sands by each well, but whether there would be any actual reduction of cost in the production of the oil could not be determined from the preliminary work.

Because of the uncertainty of the attitude to be taken by the attorney general if large bodies of land in East Texas are grouped into units it has since been decided to try to go ahead with two experimental units each of about 1,000 to 1,200 acres and try out the unitization plan. All owners of acreage in this area have agreed to enter into the plan and by starting in this relatively small way it will be possible to work out many engineering problems and secure actual cost data and other necessary information that will be valuable if other blocks are to be unitized later.

While nothing definite has actually been done toward putting this unitized plan in operation on the two blocks selected for the experiment all details have been worked out and it is predicted that the idea will be put to test soon.

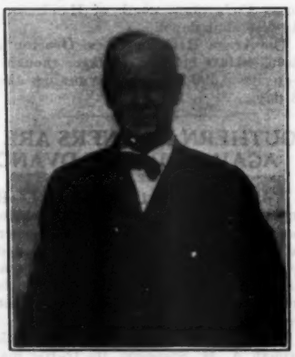
Attorneys have been inclined to be very cautious in their recommendations regarding unitization plans, but none has actually offered the opinion that such unit operation would be illegal.

Many of the executives of major companies are fully convinced of advantages to be gained by placing their holdings in unit controlled blocks and appreciate that to recover the oil in the East Texas area as economically as possible will require that advantage be taken of all engineering and production methods and they agree with the engineers who have been at work upon the plan that unitization offers the best method of operation in East Texas.

It would therefore seem that unit controlled blocks of sufficient size to permit of a complete trial of the plan will be joined together and so operated in the very near future and because of the many advantages predicted for this method of operation it is anticipated that many other unit blocks will be organized later as the results secured on the first two become evident.

CHARLES R. EASTERLY DIES IN WEST TEXAS

Charles R. Easterly, superintendent of the Southwest Texas division of the Mid-Kansas Oil & Gas Co. at Rankin, Tex., died recently from heart disease following a general breakdown of health starting over a year ago. While sick for some



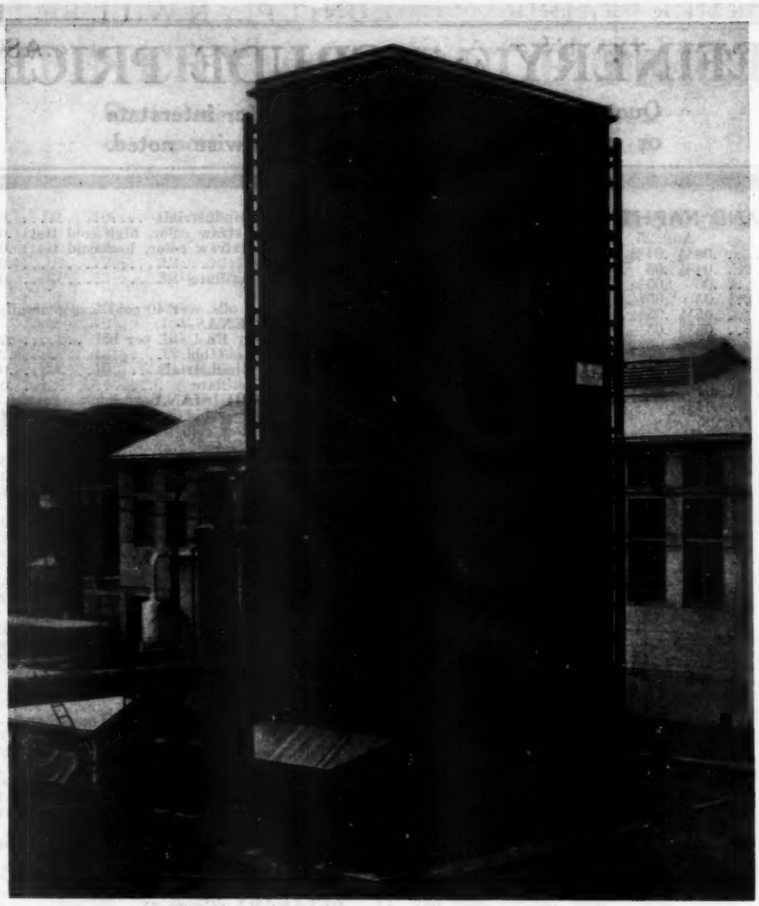
Charles R. Easterly

time his death was unexpected and came during an illness that had confined him to his bed for about a week.

Mr. Easterly was born in Ottawa, Kans., September 1, 1879, and reared in Bryan, Ohio. His experience in the oil business started about 35 years ago when he began work for various companies in Ohio which were later formed into the Ohio Oil Co.

When the Yates Pool, in Pecos County, Texas, was opened Mr. Easterly was placed in charge of production work in December, 1927.

Mr. Easterly had a wide acquaintance among the oil fraternity in both the eastern and western fields. He is survived by his widow, Mrs. Lou Easterly; two sisters, Mrs. Lavisa Smith of Edon, Ohio, and Mrs. Amy Whitney, of Bryan, Ohio; and two brothers, William H. and Clyde A. Easterly of Bryan, Ohio.



Foster Wheeler single cell cooling tower, constructed entirely of California redwood. The tower is designed for either forced or natural draft operation. Forced draft is supplied by two 8 ft. dia. propeller type fans.

Forced Draft Cooling Towers

Foster Wheeler forced draft cooling towers are designed to cool water to the lowest temperature practicable under prevailing atmospheric conditions. The air supply for securing full operating conditions is under control, irrespective of the wind. Airplane type fans, mounted on the shafts of driving motors deliver air across the full areas of the openings.

The filling of Foster Wheeler forced and natural draft towers is entirely separate from the shell. Any strains, caused by warping of the filling becoming alternately wet and dry, are therefore not transmitted to the shell. The construction provides a tower that remains tight.

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REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

	Aug. 25		Aug. 18		Aug. 11	
OKLAHOMA (Group 3)—						
50-52 450 endpoint	.04½	.04¾	.04½		.03½	.03¾
56-58 450 endpoint	.04¾	.05	.04½		.03½	.03¾
58-60 437 endpoint (U. S. Motor)	.05	.05¼	.04¾	.05	.03¾	.04
60-62 437 endpoint	.05	.05¼	.04¾	.05	.03⅞	.04
60-62 400 endpoint	.05⅛	.05¼	.05	.05⅛	.04	.04¼
64-66 375 endpoint	.05⅜	.05½	.05¼		.04¼	.04½
68-70 360 endpoint	.05½	.05⅝	.05⅝		.04⅜	.04⅝
64-66 437 endpoint (blend)	.04½	.04¾	.04¼	.04½	.03½	.03¾
NORTH TEXAS—						
50-52 450 endpoint	.04⅜		.04½		.03¼	.03½
58-60 450 endpoint	.04¾		.04½		.03½	
58-60 437 endpoint (U. S. Motor)	.05		.04¾	.05	.03¾	.04
60-62 400 endpoint	.05⅛		.05		.04	.04¼
64-66 390 endpoint	.05¼		.05⅛		.04⅛	.04¼
64-66 375 endpoint	.05⅜		.05¼		.04¼	.04½
68-70 360 endpoint	.05½		.05⅜		.04⅜	.04½
64-66 437 endpoint (blend)	.04¾		.04½		.03½	
***NORTH LOUISIANA—**						
58-60 437 endpoint (U. S. Motor)	.05¼	.05½	.04¾	.05	.04	.04¼
***ARKANSAS—**						
58-60 437 endpoint (U. S. Motor)	.05¼	.05½	.04¾	.05	.04	.04¼
PENNSYLVANIA—						
52-54 Naphtha	.04½		.04½		.04½	.04⅝
54-56 Naphtha	.04½		.04½		.04½	.04⅝
58-60 Gasoline	.05		.04¾	.05	.05	.05¼
60 Gasoline	.06		.04⅞	.05	.05¼	.05½
62 Gasoline	.05¼		.05¼		.05¼	
64 Gasoline	.05½		.05½		.05½	
68-70 350 endpoint gasoline	.05¾		.05¾		.05¾	
CALIFORNIA—						
†54-58 437 endpoint (U. S. Motor) domestic	.05¼	.07	.05¾	.07½	.05	.06½
58-60 400 endpoint domestic gasoline	.05½	.07¼	.06	.07½	.05¼	.06½
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.04½	.04¾	.04¼	.04½	.03¼	.03½
58-60 437 endpoint (U. S. Motor)	.05	.05¼	.04¾	.05	.03⅝	.04
60-62 400 endpoint	.05⅛		.05		.03¾	.04¼
64-66 375 endpoint	.05½		.05¼		.04⅛	.04¼
68-70 360 endpoint	.05½	.05⅝	.05⅝		.04¼	.04½
64-66 437 endpoint (blend)	.04½		.04¼		.03¼	
GULF COAST (Export)—						
58-60 U. S. Motor	.03¼	.03½	.03¼	.03½	.03¼	.03½
60-62 400 endpoint	.03½	.03⅝	.03½	.03⅝	.03½	.03⅝
61-63 390 endpoint	.03⅝	.03¾	.03⅝	.03¾	.03⅝	.03¾
64-66 375 endpoint	.03⅞	.03¾	.03⅞	.03¾	.03⅞	.03¾

*Louisiana, Arkansas and Mississippi delivery. †For Pacific Coast consumption.

NATURAL GASOLINE

	Aug. 25		Aug. 18		Aug. 11	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05¼		.05	.05¼	.04½	.05
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05	.05¼	.05		.04½	.04¾
Grade B, 76-83.9, 375 e.p., rec. 85%	.05		.05		.04½	
Grade BB, 84-92, 375 e.p., rec. 85%	.05		.05		.04½	
Grade C, 80-92, 375 e.p., rec. 78%	.05		.05		.04½	
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05	.05⅛	.04¾		.04¼	.04½
Grade AA, 80-87.9, 375 e.p., rec. 90%	.04¾		.04¾		.04¼	
Grade B, 76-83.9, 375 e.p., rec. 85%	.04¾		.04¾		.04¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.04¾		.04¾		.04¼	
Grade C, 80-92, 375 e.p., rec. 78%	.04¾		.04¾		.04¼	
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.05¼		.05		.04½	
Grade BB, 84-92, 375 e.p., rec. 85%	.05¼		.05		.04½	
Grade C, 80-92, 375 e.p., rec. 78%	.05¼		.05		.04½	
CALIFORNIA—						
75-78 375-390 endpoint	.04¼	.05¼	.04½	.05½	.04	.05
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05¼	.05⅜	.05		.04½	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05¼		.05		.04½	
Grade BB, 84-92, 375 e.p., rec. 85%	.05¼		.05		.04½	

BURNING OIL

	Aug. 25		Aug. 18		Aug. 11	
OKLAHOMA (Group 3)—						
41-43 water white kerosene	.02	.02½	.01⅞	.02½	.01⅞	.02½
42-44 water white kerosene	.02⅛	.02¼	.02⅛	.02¼	.02⅛	.02¼
NORTH TEXAS—						
41-43 water white kerosene	.01⅞	.02	.01¾	.01⅞	.01¾	.01⅞
40-41 water white kerosene	.01¾	.01⅞	.01¾		.01¾	
***NORTH LOUISIANA—**						
41-43 water white kerosene	.02¼	.02⅜	.02¼		.02¼	
***ARKANSAS—**						
41-43 water white kerosene	.02¼	.02⅜	.02¼		.02¼	
PENNSYLVANIA—						
43 Kerosene prime white	.03⅝		.03⅝		.03⅝	
45 Kerosene water white	.03½		.03⅝	.03½	.03½	.03¾
46 Kerosene water white	.03⅞		.03¾	.03⅞	.03¾	.03⅞
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.04	.05	.04	.05	.04	.05
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.02	.02¼	.02		.02	.02¼
42-44 water white kerosene	.02⅛	.02¼	.02⅛		.02⅛	.02¼
GULF COAST (Export)—						
41-43 prime white	.03½		.03½		.03½	
44 prime white	.03½	.03¾	.03½	.03¾	.03½	.03¾

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

	Aug. 25		Aug. 18		Aug. 11	
OKLAHOMA (Group 3)—						
Below 18 gravity Fuel Oil, per bbl.	.22½	.30	.20	.30	.20	.30
18-22 Fuel Oil, per bbl.	.25	.30	.25	.30	.25	.30
20-22 Fuel Oil, per bbl.	.25	.30	.25	.30	.25	.30
22-26 Fuel Oil, per bbl.	.27½	.32½	.25	.30	.25	.30
24-26 Fuel Oil, per bbl.	.32½	.37½	.30	.35	.30	.35
26-30 Fuel Oil, per bbl.	.40	.45	.40	.45	.35	.45
28-30 Fuel Oil, per bbl.	.40	.45	.40	.45	.35	.45
32-36 Gas Oil (industrial)	.01	.01⅛	.00¾	.00⅞	.00⅝	.00¾
32-36 Gas Oil (straw color, high cold test)	.01	.01⅛	.00¾	.00⅞	.00⅝	.00¾
32-36 Gas Oil (straw color, low cold test)	.01¼	.01⅜	.01¼	.01⅜	.01½	.01¼
36-38 Distillate	.01⅜	.01½	.01¼	.01⅝	.01¼	.01⅝
38-40 Straw Distillate	.01⅜	.01⅝	.01⅜	.01½	.01¼	.01½

Note—Fuel oils over 40 cold test generally 5 to 10 cents per barrel less.

NORTH TEXAS—						
Below 20 gravity Fuel Oil, per bbl.	.20	.25	.20	.25	.15	.25
24-26 Fuel Oil, per bbl.	.25	.30	.25	.30	.20	.30
32-36 Gas Oil (industrial)	.00⅞	.01	.00⅝	.00¾	.00⅝	.00¾
38-40 Straw Distillate	.01¼	.01⅜	.01⅛	.01¼	.01⅛	.01¼
***NORTH LOUISIANA—**						
18-20 Fuel Oil, per bbl.	.45	.55	.45	.55	.45	.55
30-32 Gas Oil (low cold test)	.01½	.01¾	.01½	.01¾	.01½	.01¾
***ARKANSAS—**						
33-36 Distillate	.01¾	.02	.01¾	.02	.01¾	.02
30-32 Gas Oil	.01½	.01¾	.01½	.01¾	.01½	.01¾
16-22 Refinery Fuel Oil, per bbl.	.45	.50	.45	.50	.45	.50
GULF COAST (South Texas)—						
Gas Oil	.02½	.02¾	.02⅛	.02⅜	.02⅛	.02⅜
Bunker C Fuel (cargo lots), per bbl.	.45	.50	.45	.50	.45	.50
Bunker C Fuel (small lots)	.55		.55		.60	
PENNSYLVANIA—						
30-34 Fuel Oil	.02½		.02½		.02½	
36-40 Fuel Oil	.02¾		.02½		.02½	
CALIFORNIA—						
42-45 480 endpoint engine distillate	.05½	.06½	.05½	.06½	.04½	.06
15-19 Fuel Oil, Bunker (at tidewater), bbl.	.60	.80	.60	.80	.60	.80
15-19 Fuel Oil (cargo lots, at tidewater), bbl.	.55	.75	.55	.75	.55	.75
†15-19 Fuel Oil (f.o.b. tank cars), bbl.	.45	.75	.45	.75	.45	.75
27 plus Diesel, per bbl.	.70	.95	.70	.95	.70	.95
30-34 Gas Oil	.70	.95	.75	1.00	.75	1.00
CHICAGO DISTRICT (Based on Group 3)—						
18-22 Fuel Oil, per bbl.	.20	.27½	.20	.27½	.20	.25
22-26 Fuel Oil, per bbl.	.25	.30	.25	.30	.25	.30
28-30 Fuel Oil, per bbl. (zero)	.42½	.45	.40	.45	.37½	.42½
32-36 Gas Oil (industrial)	.00⅞	.01	.00⅝	.00⅞	.00⅝	.00⅞
32-36 Gas Oil (zero)	.01¼	.01⅜	.01⅛	.01¼	.01	.01¼
38-40 Straw Distillate	.01¼	.01½	.01⅛	.01⅝	.01⅛	.01⅝

*Louisiana, Arkansas, Mississippi and East Texas delivery. †Lowest priced fuel oil has higher sulphur content.

LUBRICATING OIL AND WAX

	Aug. 25		Aug. 18		Aug. 11	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.04	.04½	.04	.04½	.04	.04½
100 vis., 3 color, 20-25 cold test	.03¾	.04	.03¾	.04	.03¾	.04
150 vis., 3 color, 20-25 cold test	.06¼	.06¾	.06¼	.06¾	.06¼	.06¾
150 vis., 4 color, 20-25 cold test	.05¾	.06	.05¾	.06	.05¾	.06
180 vis., 3 color, 23-28 cold test	.07¾	.08¼	.07¾	.08¼	.07¾	.08¼
180 vis., 4 color, 23-28 cold test	.07¼	.07¾	.07¼	.07¾	.07¼	.07¾
180 vis., 5 color, 23-28 cold test	.07	.07¼	.07	.07¼	.07	.07¼
200 vis., 3 color, 23-28 cold test	.08½	.09	.08½	.09	.08½	.09
200 vis., 4 color, 23-28 cold test	.08¼	.08¾	.08¼	.08¾	.08¼	.08¾
200 vis., 5 color, 23-28 cold test	.07¾	.08	.07¾	.08	.07¾	.08
240 vis., 3 color, 25-30 cold test	.10¼	.10¾	.10½	.10¾	.10½	.10¾
240 vis., 4 color, 25-30 cold test	.09½	.10	.09½	.10	.09½	.10
240 vis., 5 color, 25-30 cold test	.09	.09½	.09	.09½	.09	.09½
280 vis., 3 color, 25-30 cold test	.11¾	.12¼	.11¾	.12¼	.11¾	.12¼
280 vis., 4 color, 25-30 cold test	.10¾	.11¼	.10¾	.11¼	.10¾	.11¼
280 vis., 5 color, 25-30 cold test	.10¼	.10½	.10¼	.10½	.10¼	.10½
Cylinder Stocks:						
600, steam refined, light green	.04	.06	.04	.06	.04	.06
600, steam refined, dark green	.03	.03½	.02½	.03	.02½	.03
190-200 vis., D color, Bright Stocks	.19		.17		.17	
150-160 vis., D color, Bright Stocks 0-10 c.t.	.16	.17	.14	.15	.14	.15
150-160 vis., D color, Bright Stocks 10-25 c.t.	.15½	.16½	.13½	.14½	.13½	.14½
150-160 vis., D color, Bright Stocks 25-40 c.t.	.15	.16	.13½	.14¼	.13½	.14¼
150-160 vis., E color, Bright Stocks	.15	.16	.13½	.14	.13½	.14
Waxes:						
124-126 White Crude Scale Wax	.01⅝	.01¾	.01½	.01¾	.01½	.01¾

All bright stock prices are for domestic movement.

PENNSYLVANIA—						
34 Neutral	.05½		.05½		.05½	
34 Sundebloom	.05	.05½	.05½		.05	.05½
36 Miners' Neutral	.05½		.05½		.05½	
150, 3 color	.15½		.15¼	.15½	.15½	
180, 3 color	.17¾	.18	.17¾	.18	.17½	.18
200, 3 color	.20		.20		.20	
220, 3 color	.22	.26½	.22	.26½	.22	.26
600, steam refined	.11½	.12	.11	.11½	.11	.11½
650, steam refined	.13½	.14	.12½	.13	.12	
600, Pennsylvania Flash	.16		.14		.12½	
600, E filtered	.16		.16	.16½	.13	.14
600, D filtered, Oil City	.20		.19		.15½	.16½
Pennsylvania Bright Stocks below 35 c.t.	.26		.25		.24	.25
Pennsylvania Bright Stocks above 35 c.t.	.25	.26	.25		.24	
*122-124 White Crude Scale Wax	.019	.02	.019	.02	.019	.02
*124-126 White Crude Scale Wax	.019		.019	.02	.019	.02

*At New York.

GULF COAST (South Texas)—						
100 vis., 2-2½ color, pale oil	.05½	.05¾	.05⅝	.05½	.05⅝	.05½
200 vis., 3 color, pale oil	.07½	.07⅝	.07⅝	.07⅝	.07⅝	.07⅝
300 vis., 3 color, pale oil	.08¾	.08⅞	.08⅝	.08⅞	.08⅝	.08⅞
500 vis., 3½ color, pale oil	.09⅞	.10⅜	.09⅞	.10⅜	.09⅞	.10⅜
750 vis., 3½ color, pale oil	.11⅜	.11⅞	.11⅜	.11⅞	.11⅜	.11⅞
1,200 vis., 3½ color, pale oil	.13⅞	.14⅜	.13⅞	.14⅜	.13⅞	.14⅜
2,000 vis., 4 color, pale oil	.14⅞	.15⅜	.14⅞	.15⅜	.14⅞	.15⅜
200 vis., 5-6 color, red oil	.06¾	.06⅞	.06⅝	.06⅞	.06⅝	.06⅞
300 vis., 5-6 color, red oil	.07⅞	.08⅜	.07⅞	.08⅜	.07⅞	.08⅜
500 vis., 5-6 color, red oil	.09½	.09⅝	.09⅜	.09⅝	.09⅜	.09⅝
1,200 vis., 5-6 color, red oil	.12⅞	.13⅜	.12⅞	.13⅜	.12⅞	.13⅜
2,000 vis., 6 plus color	.14⅞	.15⅜	.14⅞	.15⅜	.14⅞	.15⅜
CALIFORNIA—						
130 vis., 2½-3 color	.08	.08½	.08	.08½	.08	.08½

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

200 vis., 2½-3 color	.09	.10	.09	.10	.09	.10
300 vis., 3-3½ color	.10	.11	.10	.11	.10	.11
350 vis., 3½-4 color	.11	.12	.11	.12	.11	.12
450 vis., 3½-4 color	.12	.12½	.12	.12½	.12	.12½
550 vis., 3½-4 color	.12½	.13¼	.12½	.13¼	.12½	.13¼
Red Neutral:						
200 vis., 4½-5 color	.09½	.10	.09½	.10	.09½	.10
300 vis., 5-6 color	.10½	.10¾	.10¼	.10¾	.10¼	.10¾
500 vis., 4½-5 color	.12¼	.13	.12¼	.13	.12¼	.13
600 vis., 6½ plus color	.13	.13½	.13	.13½	.13	.13½
700 vis., 6½ plus color	.14	.15	.14	.15	.14	.15

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Aug. 25	Aug. 18	Aug. 11
Gasoline, U. S. Motor, 58-60, 437 e.p.	.05½ 06	.05½ .06	.05¼ .06
Kerosene, water white, 41-43	.04¾	.04¾	.04¾
*Fuel Oil, Bunker "C," 41-43	.70	.70	.70
†Fuel Oil, Diesel, 28-30, per bbl.	1.40	1.40	1.40
Gas Oil, 28 gravity plus	.04	.04	.04
25 pale Paraffin Oil, tank car	.10¼	.10¼	.10¼
28 pale Paraffin Oil, tank car	.07¼	.07¼	.07¼
280 red Paraffin Oil, tank car	.12½	.12½	.12½
250 red Paraffin Oil, tank car	.11½	.11½	.11½
225 red Paraffin Oil, tank car	.10	.10	.10
200 red Paraffin Oil, tank car	.09¼	.09¼	.09¼
Domestic heating oil, min. 32 grav., tank car	.04	.04	.04
Refined Wax:			
120-122 a.m.p., per lb.	.03	.03	.03
125-127 a.m.p., per lb.	.03⅛	.03⅛	.03⅛
130-132 a.m.p., per lb.	.03⅝	.03⅝	.03⅝
133-135 a.m.p., per lb.	.04⅛	.04⅛	.04⅛
135-137 a.m.p., per lb.	.04⅝	.04⅝	.04⅝
Petrolatum in barrels in carload lots, per pound:			
Dark Green	.01⅝	.01⅝	.01⅝
Amber	.02⅝	.02⅝	.02⅝
Extra Amber	.02⅞	.02⅞	.02⅞
Cream	.05⅝	.05⅝	.05⅝
Lily White	.06½	.06½	.06½
Snow White	.07	.07	.07

*Lighterage 5 cents a barrel extra. †Lighterage 6.5 cents a barrel.

NEW YORK (BAYONNE) EXPORT PRICES

	Aug. 25	Aug. 18	Aug. 11
600, steam refined cylinder stocks, in bbls.	.17½ .18	.17½ .18	.17½ .18
635, steam refined	.19 .20	.19 .20	.19 .20
650, steam refined	.20 .21	.20 .21	.20 .21
600, Pennsylvania Flash	.22 .23	.22 .23	.22 .23
630, Pennsylvania Flash	.27¾ .28	.27¾ .28	.27¾ .28
600, Warren E	.22 .23	.22 .23	.22 .23
600, Oil City E	.21 .22	.21 .22	.21 .22
Light 140-150 Bright Stocks	.30 .33	.30 .33	.30 .33
Dark 140-150 Bright Stocks	.29 .31	.29 .31	.29 .31

LOS ANGELES EXPORT PRICES

	Aug. 25	Aug. 18	Aug. 11
Kerosene, water white	.04 .05	.03¾ .05	.03¾ .05
U. S. Motor gasoline, 53-55, 437 e.p.	.03¾ .04½	.04 .05	.03¼ .04½
58-60, 400 endpoint gasoline	.04 .04¾	.04¼ .05¼	.03¾ .04¾

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

East Texas (Aug. 22, 1931)† ..... $ .68
Rusk County, Tex. (April 6, 1931)* ..... .25
Corsicana heavy (Aug. 22, 1931)† ..... .34
Other fields ..... See gravity table

*Posted by Panola Pipe Line Co. †Posted by Magnolia Petroleum Co., June 20; Stanolind Oil & Gas Co., June 25. †Posted by Magnolia Petroleum Co. ‡Posted by Tidal Western Oil Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties. See gravity table

WEST TEXAS

Iatan and Westbrook. Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Ector, Winkler and Pecos Counties* ..... $ .35
Lea County, N. Mex.* ..... .35

*The Texas Company, August 22, 1931. All other companies, August 22.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective August 17, 1931)

Penna Grade Oil in National Transit Lines (Pennsylvania) $1.75
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.60
Penna. Grade Oil in Eureka Pipe Line Lines (West Virginia) 1.50
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio) 1.35
Corning Grade Oil in Buckeye Pipe Line Co.'s Line ..... .65
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931) .... .60
Wayne district Oil in Cumberland Pipe Lines (April 23, 1931) 1.17

Tide Water Pipe Co.
(Effective August 17, 1931)

Bradford, Pa., crude $2.00
Allegany, N. Y., crude 2.00

Pure Oil Co.
(Effective August 17, 1931)

Cabin Creek, W. Va. $1.50
Kelly's Creek, W. Va. 1.50
Bradford Hollow, W. Va. 1.50

GULF COAST

Grade A and Grade B classifications discontinued by leading buyers .....
..... See gravity table
Jennings, La. (Aug. 22, 1931)* ..... $ .50
Lockport, La. (July 8, 1931)† .....
..... See Gulf Coast gravity table
Refugio light ..... See gravity table
Refugio heavy (Aug. 22, 1931)‡ ..... .60
Markham (Aug. 22, 1931)§ ..... .52
..... See Gulf Coast gravity table
High Island (Aug. 22, 1931)¶ ..... .50

*Gulf Refining Co. †Vacuum Oil Co. ‡Humble Oil & Refining Co. §The Texas Company. Other companies July 24. ¶Gulf Pipe Line Co.

NORTH LOUISIANA AND ARKANSAS

Smackover, Ark. (all grades) See note below
Urbana, Ark. ..... See note below
Bellevue, La. (June 3, 1931) ..... $ .25
Urania, La. (June 3, 1931) ..... .30
Calion, Ark. (Aug. 22, 1931) ..... .52
East El Dorado, Ark. (Aug. 22, 1931) .. .45
Stephens, Ark. (June 3, 1931) ..... .20
Other fields ..... (See gravity table)

Note—Smackover, all grades, The Texas Company, August 22, 1931, 52 cents; Gulf Refining Co., August 22, 45 cents; Magnolia Petroleum Co. and Standard Oil of Louisiana, August 24, 45 cents. Urbana posting discontinued by Standard Oil Co. of Louisiana on August 24, 1931. Bellevue posted by Magnolia Petroleum Co.; Urania by Louisiana Oil Refining Co.; Calion by Gulf Refining Co.; East El Dorado by Gulf Refining Co., August 22 and Magnolia Petroleum Co., August 24; Stephens, Ark., by Louisiana Oil Refining Co. and Atlantic Oil Producing Co.

SOUTH CENTRAL AND SOUTHWEST TEXAS

Darst Creek (Aug. 22, 1931)* ..... $ .52
Luling (Aug. 22, 1931)† ..... .34
Mirando (Aug. 22, 1931)* ..... .60
Pettus (Aug. 22, 1931)* ..... .70
Salt Flat (Aug. 22, 1931)* ..... .52
Thrall‡ ....

(Continued on Page 102)

CRUDE OIL GRAVITY TABLE

	Okla., Kans. East Central and North Central Tex. (1)	Oklahoma. (2)	North Louisiana and Arkansas (3)	Gray County, Texas (4)	Hutchinson, Carson and Moore Counties, Texas (5)	Gray County, Texas (6)	Carson and Hutchinson Counties, Tex. (7)	Salt Creek, Wyo. (8)	Gulf Coast (9)
Below 25 degrees	...	...	...	...	...	...	...	...	.55
25-25.9 degrees	...	...	...	...	...	...	...	...	.56
26-26.9 degrees	...	...	...	...	...	...	...	...	.57
27-27.9 degrees	...	...	...	...	...	...	...	...	.58
28-28.9 degrees	...	...	...	...	...	...	...	...	.59
Below 29 degrees	.46	...	.46	...	...	...	...	.46	...
29-29.9 degrees	.48	.78	.48	...	...	...	...	.48	.60
30-30.9 degrees	.50	.80	.50	...	...	...	...	.50	.61
31-31.9 degrees	.52	.82	.52	...	...	...	...	.52	.62
32-32.9 degrees	.54	.84	.54	...	...	...	...	.54	.63
33-33.9 degrees	.56	.86	.56	...	...	...	...	.56	.64
34-34.9 degrees	.58	.88	.58	.60	.48	.46	.41	.58	.65
35-35.9	.60	.90	.60	.62	.50	.48	.43	.60	.66
36-36.9 degrees	.62	.92	.62	.64	.52	.50	.45	.62	.67
37-37.9 degrees	.64	.94	.64	.66	.54	.54	.47	.64	.68
38-38.9 degrees	.66	.96	.66	.68	.56	.54	.49	.64	.69
39-39.9 degrees	.68	.98	.68	.70	.58	.56	.51	.64	.70
40 degrees and above	.70	1.00	.70	.72	.60	.58	.53	.64	.71

Note—Magnolia Petroleum Co. does not pay on a gravity basis. The Magnolia company posted the following notices on August 22 and August 24 as indicated in the notices:

"Effective August 22, 1931, and until further notice our prices on crude oil will be as follows per barrel at the wells: Central Texas, which includes only Mexia, Wortham, Corsicana light, Panola County, and Lytton Springs, 64 cents; Panhandle district of Texas, Gray County, 58 cents; Carson and Hutchinson Counties, 51 cents; West Texas, being Crane, Upton, Howard, Glasscock and Mitchell Counties, 35 cents; Mirando, 60 cents; Darst Creek, 52 cents; Luling, 34 cents; Corsicana heavy, 34 cents. Oklahoma, including Cushing, Yale, Oklahoma City, Morrison, Wewoka and Seminole, 68 cents; Cement, Duncan, and Walters, 60 cents; Healdton, 37 cents; Hewitt and Graham, 52 cents. North and Central Texas, including only Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden, 68 cents; East Texas, 68 cents.

"Effective August 24, 1931, and until further notice our prices on crude oil in the states of Louisiana and Arkansas will be as follows per barrel at the wells: Louisiana, Bull Bayou, 68 cents; Haynesville, 50 cents; Pine Island, 58 cents; Cotton Valley, 46 cents. Arkansas, El Dorado and Rainbow, 48 cents; El Dorado East Field and Smackover district, 45 cents."

Colmun 1—The Texas Company (excepting Kansas), August 22; Gypsy Oil Co., Gulf Pipe Line, Carter Oil Co., Humble Oil & Refining Co., Stanolind Crude Oil Purchasing Co., Sinclair Refining Co., Continental Oil Co., Skelly Oil Co. (Kansas), Empire Pipe Line Co., Wilcox Oil & Gas Co., Tidal Refining Co., Pure Oil Co., Vickers Petroleum Co., Derby Oil Co., all on August 22.

Column 2—Phillips Petroleum Co., August 24.

Column 3—The Texas Company, August 22; Gulf Refining Co., August 22; Standard Oil Co. of Louisiana, August 24; Louisiana Oil Refining Co., August 24.

Column 4—Phillips Petroleum Co., August 24; Wilcox Oil & Gas Co., August 24.

Column 5—Phillips Petroleum Co., August 24.

Column 6—The Texas Company, August 22; Gulf Pipe Line Co., August 22; Humble Oil & Refining Co., August 22.

Column 7—The Texas Company, August 22; Gulf Pipe Line Co., August 22; Humble Oil & Refining Co., August 22.

Column 8—The Mid West Refining Co., August 22.

Column 9—The Texas Company, August 22; Humble Oil & Refining Co. and Gulf Pipe Line Co. on August 22 but their price schedule stops at 35 and above at 66 cents. Sun Co. and Sinclair Refining Co. met Humble-Gulf prices effective August 22, but Sun Co. posted a price of 55 cents for Grade A oil, it being the only company that maintains A and B grade classifications.

CALIFORNIA CRUDE OIL PRICES

STANDARD OIL CO. OF CALIFORNIA

For its current purchases of crude oil at the well (unless otherwise specified) for allowable crude oil produced in accordance with allocations made by the California Statewide Curtailment Committee. All gravities above those quoted take highest price offered in that field. Effective June 19, 1931, at 7 a. m.

Gravity	Signal Hill	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Olinda-Bres Canon	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	$.65	$.65	...	$.55	$.55
15-15.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
16-16.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
17-17.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
18-18.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
19-19.9	.65	.65	.65	.65	.65	.65	.65	.65	...	.55	.55
20-20.9	.65	.65	.65	.66	.66	.65	.65	.65	...	.55	.55
21-21.9	.65	.65	.65	.68	.67	.65	.66	.65	...	.55	.57
22-22.9	.65	.65	.66	.70	.68	.66	.68	.65	...	.56	.59
23-23.9	.67	.67	.68	.72	.70	.67	.70	.66	...	.58	.60
24-24.9	.69	.69	.70	.74	.72	.68	.72	.67	$.65	.61	.62
25-25.9	.71	.71	.72	.76	.74	.70	.74	.69	.65	.64	.64
26-26.9	.73	.73	.74	...	.76	...	...	.71	.65	.66	.66
27-27.9	.75	.75	.76	...	.78	...	...	.73	.68	.68	.67
28-28.9	.77	...	...	...	.80	...	...	.75	.71	.71	.69
29-29.9	.79	...	...	...	...	...	...	.77	.73	.74	.71
30-30.9	.81	...	...	...	...	...	...	.79	.75	.76	.72
31-31.9	...	...	...	...	...	...	...	...	.78	...	...
32-32.9	...	...	...	...	...	...	...	...	.80	...	...
33-33.9	...	...	...	...	...	...	...	...	.83	...	...
34-34.9	...	...	...	...	...	...	...	...	.86	...	...
35-35.9	...	...	...	...	...	...	...	...	.87	...	...

Standard Oil Co. of California prices in other fields:

Wheeler Ridge—55 cents per barrel for all grades (14° to 25.9°).

Coalinga—55 cents for all grades from 14° to 24-24.9°; 57 cents for 25 gravity.

Newhall, McKittrick and Kern River—55 cents for all grades (14° to 19.9°).

Montebello—65 cents for all grades (14° to 25.9°).

Whittier and LaHabra—65 cents for all grades (14° to 22.9°).

Elwood Terrace, f.o.b. ship—33° to 33.9°, 79 cents; 34° to 34.9°, 81 cents; 35° to 35.9°, 84 cents; 36° and above 87 cents.

Playa Del Rey—Prices subject to field gathering charge of 5 cents per barrel—19° to 19.9°, 65 cents; 20° to 20.9°, 65 cents; 21° to 21.9°, 66 cents; 22° to 22.9°, 67 cents; 23° to 23.9°, 68 cents; 24° to 24.9°, 67 cents; 25° and above, 68 cents.

ASSOCIATED OIL CO. PRICES

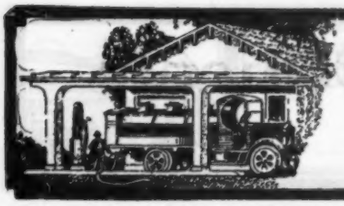
Associated Oil Co. prices, effective June 20, are as follows:

Ventura Avenue, 22 gravity, 58 cents, with 2 cents added for each degree upward to and including 30 gravity, which is 74 cents.

Kettleman Hills, 30 gravity and above, 66 cents.

Potrero, 24 gravity, 69 cents with 2 cents added for each degree upward to 34 gravity, which is 69 cents.

(Continued on Page 112)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns August 25

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago	14.0	14.0	3.0	9.0
Decatur, Ill.	14.4	14.4	3.0	9.0
E. St. Louis	13.7	13.7	3.0	8.2
Joliet	14.4	14.4	3.0	9.0
Peoria	14.4	14.4	3.0	9.0
Quincy	14.2	14.2	3.0	8.8
Davenport, Ia.	14.5	14.5	3.0	9.3
Des Moines	14.5	14.5	3.0	9.3
Keokuk	14.5	14.5	3.0	9.3
Sioux City	14.1	14.1	3.0	8.9
Duluth, Minn.	15.5	15.5	3.0	9.9
Mankato	15.1	15.1	3.0	9.7
Minneapolis	15.2	15.2	3.0	9.9
La Crosse, Wis.	16.2	16.2	4.0	10.0
Milwaukee	15.1	15.1	4.0	8.9
Madison	15.3	15.3	4.0	9.1
Detroit, Mich.	14.5	14.5	3.0	10.7
Grand Rapids	14.7	14.7	3.0	10.6
Saginaw	14.9	14.9	3.0	10.8
Evansville, Ind.	15.1	15.1	4.0	9.9
Indianapolis	15.3	15.3	4.0	10.1
South Bend	15.4	15.4	4.0	10.2
Fargo, N. D.	16.9	16.9	3.0	11.9
Huron, S. D.	16.3	16.3	4.0	10.7
Sioux Falls	15.8	15.8	4.0	10.4
K. C., Mo.	13.9	13.9	3.0	7.6
Springfield*	13.9	13.9	3.0	8.5
St. Louis*	12.9	12.9	2.5	8.3
St. Joseph	13.5	13.5	3.0	7.5
Wichita, Kans.	12.8	12.8	3.0	7.8
Bartlesville, Ok.	13.0	16.0	5.0	7.5

*State tax 2 cents, remainder city tax.

A third grade of gasoline, "Stanolind Blue," is sold at all major points at a price 2 cents or more below the price on the regular grade.

Effective April 15—Discounts on Q.D.A. on 1,000 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	13.0	14.0	4.0	8.0
Fort Worth	11.0	12.0	4.0	8.0
Houston	11.0	13.0	4.0	11.0
San Antonio	11.0	13.0	4.0	10.0
El Paso	12.0	14.0	4.0	12.0
Texarkana	16.0	16.0	4.0	11.0
Muskogee, Ok.	13.0	15.0	5.0	8.0
Okla. City	13.0	15.0	5.0	7.0
Tulsa	13.0	15.0	5.0	8.0
Ft. Smith, Ark.	14.5	15.5	5.0	11.0
Little Rock	16.0	16.0	6.0	11.0

One-cent rebate made from posted station prices to cash purchasers in Louisiana, Arkansas and Tennessee.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wag n	Service station	Incl'ds tax of	tank wagon
Omaha	15.25	16.25	4.0	9.25
McCook	16.0	17.75	4.0	10.75
Norfolk	15.75	16.75	4.0	9.75
N. Platte	16.75	17.75	4.0	10.50
Scottsbluff	16.0	16.0	4.0	10.25

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal station price; Red Crown, 2½ cents off normal service station price; Nabraska Blue (third grade) 1 cent off normal service station price.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	15.0	18.0	4.0	12.5
Pueblo	15.0	18.0	4.0	12.0
Grand Junction	17.0	20.0	4.0	14.5
Casper, Wyo.	15.0	18.0	4.0	10.0
Cheyenne	16.0	19.0	4.0	11.5
Butte, Mont.	17.0	20.0	5.0	16.0
Billings	21.0	24.0	5.0	14.5
Great Falls	21.0	24.0	5.0	16.0
Helena	21.0	24.0	5.0	16.0
Salt Lake, Utah	17.5	20.5	4.0	16.0
Albu'que, N.M.*	18.0	21.0	6.0	14.0
Boise, Idaho	20.5	23.5	5.0	18.0
Twin Falls	20.5	23.5	5.0	18.0

*One-cent excise city tax.

PACIFIC COAST TERRITORY

	Gasoline			Kero.
	Wh'l'e price	Retail* price	Incl'ds tax of	tank wagon
Fresno	19.5	16.5	3.0	17.0
San Francisco	19.5	16.5	3.0	15.5
Los Angeles	19.0	16.0	3.0	15.5
Reno, Nev.	23.5	20.5	4.0	19.0
Portland, Ore.	21.0	18.0	4.0	16.5
Seattle, Wash.	22.0	19.0	5.0	16.5
Tacoma	22.0	19.0	5.0	16.5
Spokane	25.5	22.5	5.0	20.5
Phoenix, Ariz.	15.5	17.5	5.0	20.0

Above prices are at company's plant or depots as company does not operate stations. A 6-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 3 cents plus a 2-cent special temporary discount subject to withdrawal at any time.

*Retail prices posted by Standard Stations, Inc., a subsidiary.

PENNSYLVANIA-DELAWARE AND PART OF NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	*10.0	*11.0	...	11.0
Philadelphia	*10.0	.10.0	...	11.0
Scranton	*10.0	*11.0	...	11.0
Allentown	*10.0	*11.0	...	11.0
Altoona	*10.0	*11.0	...	11.0
Erie	*10.0	*11.0	...	11.0
Dover, Del.	13.0	15.0	3.0	11.0
Wilmington	13.0	13.0	3.0	11.0
Springf'd, Mass.	15.5	16.0	3.0	10.0
Worcester	15.3	16.0	3.0	10.0
Boston	13.0	15.0	3.0	10.0
Providence, R.I.	12.5	13.0	3.0	10.0
Hartford, Conn.	14.5	15.5	3.0	10.0
New Haven	14.6	15.5	3.0	10.0

*Does not include tax of 3 cents in Pennsylvania. Pennsylvania tax is collected by the dealer and paid by him direct to the State. The above prices are subject to discounts to dealers and to commercial accounts under contract for one year in accordance with Code of Ethics.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.	16.0	15.0	6.0	12.0
Baton Rouge	15.0	16.0	5.0	12.0
Alexandria†	16 0	17.0	6.0	12.0
Lafayette*	16.0	17.0	6.0	12.0
Lake Charles*	16.0	17.0	6.0	12.0
Shreveport	15.0	16.0	5.0	12.0
Knoxville, Tenn.	18.5	19.5	6.0	13.5
Memphis	16.5	17.5	6.0	10.0
Chattanooga	18.0	19.0	6.0	12.0
Nashville	15.5	15.5	6.0	12.5
Bristol	17.5	18.5	6.0	14.0
Lt. Rock, Ark.	16.0	16.5	6.0	11.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Gasoline price at Alexandria includes 1-cent tax in parish of Rapides.

Two-cent discount off gasoline and kerosene tank wagon price to dealer and commercial accounts.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atl'tic City, N.J.	13.7	13.7	3.0	10.5
Newark	12.7	13.7	3.0	9.5
Annapolis, Md.	14.3	15.2	4.0	10.0
Baltimore	13.4	14.4	4.0	8.5
Cumberland	15.2	16.2	4.0	11.0
Wash'ton, D. C.	11.9	12.9	2.0	9.7
Danville, Va.	16.0	17.0	5.0	10.5
Norfolk	14.5	15.5	5.0	9.3
Petersburg	15.5	16.5	5.0	10.3
Richmond	14.9	15.9	5.0	9.7
Roanoke	16.2	17.2	5.0	11.0
Charles'n, W.Va.	14.7	15.7	4.0	10.5
Keyser	15.3	16.3	4.0	11.1
Parkersburg	13.4	14.4	4.0	9.3
Wheeling	14.6	15.6	4.0	10.4
Charlotte, N. C.	17.5	16.0	6.0	11.3
Hickory	17.5	18.5	6.0	11.6
Mt. Airy	17.7	18.7	6.0	11.5
Raleigh	17.4	18.4	6.0	11.2
Salisbury	17.7	18.7	6.0	11.5
Charleston, S.C.	15.5	16.5	6.0	9.3
Columbia	17.4	18.4	6.0	11.2

A 2-cent per gallon discount off the gasoline tank wagon price is offered to dealers, except in Washington, D. C. and in States of New Jersey and Maryland where discount is 3 cents.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	16.6	17.6	2.0	15.6
New York*	15.3	15.3	2.0	14.3
Buffalo	15.8	15.8	2.0	14.8
Rochester	16.0	16.0	2.0	14.0
Syracuse	16.8	16.8	2.0	14.8
Boston, Mass.	16.5	16.5	3.0	13.5
Augusta, Me.	18.8	18.8	4.0	14.8
Manch'tr, N. H.	18.4	18.4	4.0	14.0
Burlington, Vt.	19.3	19.3	4.0	15.3

*Prices in steel barrels.

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points	15.0	16.0	4.0	*12.0

Dealers and commercial accounts 2 cents under tank wagon.

*Service station price 13.0 cents.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.	14.0	14.0	6.0	12.5
Augusta	18.0	20.0	6.0	14.0
Macon	16.0	16.0	6.0	12.0
Savannah	17.0	18.0	6.0	12.0
Birm'ham, Ala.	15.0	15.0	6.0	13.0
Mobile	18.5	18.5	5.0	10.0
Montgomery	17.0	17.0	5.0	13.5
Clarks'le, Miss.	18.0	20.0	5.0	13.5
Jackson	13.0	13.0	5.0	11.5
Natchez	18.0	20.0	5.0	13.5
Gulfport	16.0	16.0	5.0	13.5
Vicksburg	14.0	14.0	5.0	11.5
Jack'ville, Fla.	17.0	18.0	7.0	12.0
Miami	19.0	21.0	7.0	13.0
Pensacola	17.0	18.0	7.0	13.0
Tampa	16.0	17.0	7.0	12.0
Lexington, Ky.	17.0	18.0	5.0	12.0
Covington	16.0	17.0	5.0	11.0
Louisville	16.0	17.0	5.0	10.0
Ashland	17.0	19.0	5.0	13.0
Paducah	16.0	17.0	5.0	11.0
Bowling Green	19.0	21.0	5.0	14.5
Corbin	18.0	19.0	5.0	15.0

A third grade "Kyso Green," is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Montgomery, Birmingham and Mobile state taxes add 1-cent levy tax. To Gulfport state tax add privilege tax of 2 cents.

Effective April 2 price to dealers 2 cents under posted tank wagon price.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	10.7	6.0
V.M.P. naphtha	12.7	7.5
Cleaners' naphtha	14.2	9.0
Stanisol	14.2	9.0

Tank wagon prices f.o.b. Chicago and Whiting, effective July 3.

STANOLIND FURNACE OIL IN CHICAGO

Effective July 1, prices f.o.b. Chicago, tank wagon prices: 1 to 99 gallons, 8 cents; 100 gallons or more 6 cents.

Stanolex Fuel

Effective May 9, f.o.b. Chicago, tank wagon prices: 1 to 199 gallons, 7 cents; 200 gallons or more, 5 cents. Sinclair met this by bringing down the price of its No. 3.

Fuel Oils

Chicago tank wagon prices (in lots of 400 gallons and over): 28-40 straw distillate, 6 cents; 32-36 gas oil (light zero), 5.5 cents; 32-36 gas oil (industrial) 5.25 cents; 28-30 zero fuel oil, 5 cents; 24-26 fuel oil, 4.25 cents; 18-22 fuel oil, 3.75 cents.

TANK WAGON CHANGES

Standard Oil Co. of Louisiana reduced the gasoline tank wagon and station price 1 cent in Nashville, Tenn., August 19 and on the same date reduced the station price in Chattanooga 1 cent.

Standard Oil Co. of Louisiana advanced the gasoline tank wagon and sta-

(Continued on Page 112)

CRUDE OIL PRICE CHANGES

The Texas Company on August 22, followed by other purchasers, increased crude oil prices in Oklahoma, North Central Texas, Gulf Coast, Texas Panhandle, West Texas and Southwest Texas, southeastern New Mexico, Louisiana and Arkansas. On same day The Texas Company's Oklahoma price schedule was applied to Kansas by buyers in that State and likewise in East Central Texas. The exceptions were the Magnolia Petroleum Co. and Phillips Petroleum, which companies posted different schedules on August 24.

On August 22 the Magnolia posted 68 cents for East Texas crude and this price was adopted by the Sun Oil Co. on August 24.

The Ohio Oil Co. on August 24 ad-

(Continued on Page 112)

CRUDE OIL PRICES

(Continued from Page 101)

Lytton Springs (Lockhart). See gravity table
Dobrowolski‖ .....
Same as Mid-Continent gravity scale up to and including 38-38.9°
Somerset¶ .....
Same as Mid-Continent gravity scale up to and including 38-38.9°

*Texas, Humble and Gulf all posted on August 22. †Magnolia Petroleum Co. ‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight. §Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products. ‖Pioneer Oil & Refining Co.

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.

Iles, light (Aug. 24, 1931)	$ .75
Iles, heavy (Aug. 24, 1931)	.53
Fort Collins (July 24, 1931)	.35
Florence (July 24, 1931)	.32
Wellington (July 24, 1931)	.30
Dutton Creek (Aug. 24, 1931)	.60
Rock Creek, Wyo. (Aug. 24, 1931)	.70
Frannie, light (Aug. 24, 1931)	.53
Frannie, heavy (Aug. 24, 1931)	.43
Salt Creek.....Mid-Continent gravity table	
Big Muddy (Aug. 24, 1931)	.60
Grass Creek (Aug. 24, 1931)	.90
Elk Basin (Aug. 24, 1931)	.90
Lance Creek (Aug. 24, 1931)	1.05
Poison Spider (Nov. 5, 1931)	.70
Notches (Mar. 14, 1927)	.65
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage (Apr. 15, 1931)	.95
Lost Soldier (Aug. 1, 1931)	.35
Hamilton Dome (Mar. 14, 1927)	.95
Greybull (Aug. 24, 1931)	.90
Torchlight (Aug. 24, 1931)	.90
Cat Creek (Aug. 24, 1931)	.90
Pondera (Aug. 24, 1931)	.80
Sunburst, Mont. (Aug. 24, 1931)*	.90
Sunburst, Mont. (Aug. 24, 1931)	.80
Hogback, N. Mex. (Aug. 24, 1931)	.80
Lea County, N. Mex. (Aug. 24, 1931)	.35
Border, Mont.	.55
Red Coulee, Alberta	1.55
Dry Creek, Mont. (Aug. 24, 1931)	1.00
Maljamar (Aug. 22, 1931)	1.00
Artesia-Jackson (Aug. 22, 1931)	.35

*In Sunburst Midwest Refining Co. posts 90 cents and Ohio Oil Co. 80 cents.

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull and Hogback posted by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Ohio Oil Co. ceased posting Artesia on March 5, 1931. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by the Continental Oil Co. Osage posted by Arro Oil & Refining Co.

MIDDLE WESTERN STATES

Ohio Oil Co.

(Effective August 24, 1931)

Lima	$ .90
Wooster	1.00
Illinois	.80
Indiana	.60
Princeton	.80
Plymouth	Shut in
Western Kentucky	.75
Midland, Mich.*	.75
Dundee, Mich.†	
Same as Stanolind Crude Oil Purchasing Co.'s Mid-Continent gravity scale	
Upper and Lower Traverse Sands, Mich.†	
.....Same as Mid-Continent gravity scale	
Somerset, Ky. (Aug. 22, 1931)	.80
Hart County, Ky. (Aug. 24, 1931)‖	.75
Petrolia (Canada) (Aug. 24, 1931)¶	1.80
Oil Springs (Canada) (Aug. 24, 1931)¶	1.87

*Posted by Pure Oil Co. †Posted by Standard of Indiana for boat shipment. ‡Posted by Stoll Refining Co. §Posted by Imperial Oil, Ltd. Somerset, Ky., crude purchased by Ashland Refining, Ashland, Ky., and delivered through Cumberland Pipe Line.

Panuco*	$ .44

*F.o.b. ship, based on July transactions and exclusive of taxes and bar dues.

Of Interest to Sales Departments

STUDY BULK STORAGE EVAPORATION LOSSES

Large quantities of gasoline are lost each year by evaporation from bulk storage station tanks, according to the results of a study of the subject just completed by the U. S. Bureau of Mines, Department of Commerce. The tests made by the Bureau of Mines show that light-colored paints, tank-housing, and increased operating pressures each materially reduce the evaporation losses of gasoline in bulk station storage tanks. The results indicate that probably combinations of pressure with light-colored paints or tank housing would be most effective and economical in reducing these losses. It is believed that bulk station operators will find it economical to use relief valves that will close quickly and tightly as soon as the pressure within the tank is reduced to the operating pressure of the valves. The rate of evaporation from bulk station tanks is influenced by two principal factors: First, the vapor pressure of the gasoline in tanks; and second, the amount of "breathing" of the tank. The vapor pressures of the gasoline govern the amount of the gasoline vapor in the air-vapor mixture above the gasoline in a tank at a given temperature. The "breathing" of the tank is caused by the inflow of air from the atmosphere during certain periods of the day and the expulsion of the air-vapor mixtures at other times, caused by atmospheric variations.

Two of the most common methods for reducing evaporation losses from bulk storage tanks are: The use of vapor-tight tanks equipped with relief valves; and reducing the temperature of tanks and their contents by painting them a light color, by insulation, and in some instances by using water sprays.

In order to determine and compare the effects of various colors, insulation, and pressure in reducing the evaporation losses of gasoline held in storage in bulk storage tanks, the Bureau of Mines made observations on five horizontal tanks of 12,000-gallon capacity each, which were erected in Kansas City, Mo.

Details of this study are given in Report of Investigations 3,138, "Reduction of Evaporation Losses From Gasoline Bulk Storage Station Tanks," by Ludwig Schmidt and C. J. Wilhelm. The report may be obtained without cost upon application to the Section of Publications, U. S. Bureau of Mines, Washington, D. C.

EXPAND USE OF OIL AS SPRAY

The Standard Oil Co. of California has added the Spray-Chemical Corp. as one of its subsidiaries because of the company's interest in the use of mineral oils as spray materials. The new company will continue the business of what has been known as the California Spray Chemical Co.

The board of directors of the new company includes K. R. Kingsbury, R. K. Davies, G. E. Kennedy, B. W. Letcher and P. P. Matt, representing the Standard Oil Co. of California, and E. E. Luther, R. K. Vickery, Paul A. Sinsheimer and W. H. Volck, representing the predecessor company.

PLACE LUB OIL ORDER

OLEAN, N. Y., Aug. 24.—An order for 500,000 gallons of Pennsylvania lubricating oil was given refiners rerunning crude from the Bradford-Allegany Field by Montgomery Ward & Co. The requirements of the company are considerably above this, the total lubricating oil sales approximating 5,000,000 gallons annually.

STANDARD OIL CO. OF NEW JERSEY TO BUILD LARGEST SUPERSTATION

The Standard Oil Co. of New Jersey has started the construction of a super-service station a few blocks from the capitol in Washington, D. C. In order to provide harmony in architecture with the program of new buildings soon to be erected by the Government, the company has adopted a unique design. The description of the new building as outlined in "The Lamp" provides for a building 335 feet long and 70 feet deep. It will be six stories in height and will be fully equipped with the most modern appliances for practically every type of service required by an automobile. Present plans call for its completion around the first of the year.

The entire basement of the building will be given over to servicing and will contain equipment for special chassis and engine cleaning, brake lining and adjusting, wheel aligning and adjusting, and tightening of body bolts. A sub-basement will be provided for housing the machinery, equipment and heating plant of the building.

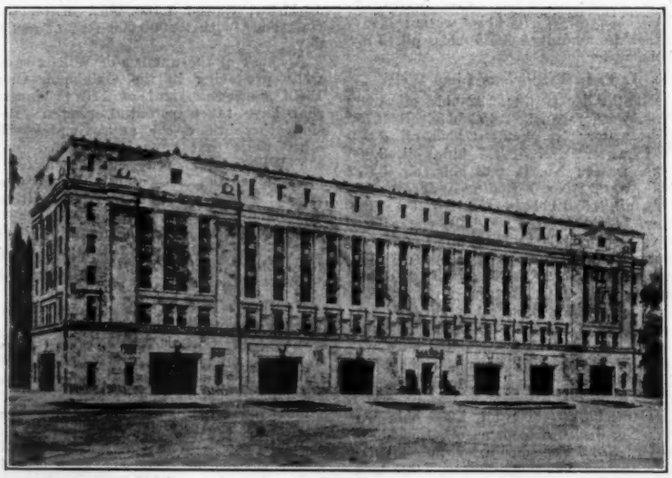
The gasoline and oil dispensing equipment will be located on the main street floor. Provision has been made for 52 outlets housed in 26 pumps, which will dispense both "Standard" gasoline and Esso. There will also be an automobile laundry with special machinery for mechanical washing. With this up to date equipment the laundry will be able to wash over 300 cars in the space of eight hours.

The lubricating system makes possible the oiling and greasing of a large number of cars with the same care and individual attention which are found at the greasing racks of "Standard" service stations in the field. An ingenious lubrication track, capable of handling 200 vehicles a day, has been designed to service the car while it is in motion. In this manner men specializing in the lubrication of certain portions of the cars will attend to each particular section as the vehicle moves along on its mechanical conveyor.

The main lounge and attractively furnished rest room for women customers are located on the mezzanine floor. Stock rooms, battery charging equipment and a laundry for the uniforms of attendants and other items will also be found here.

Express elevators will carry automobiles from the street to the sixth floor, which is given over to storage and polishing. There will be space for something like 100 vehicles on this floor.

The offices of J. Z. Walker, manager, and the Washington branch of the Standard Oil Co. of New Jersey will occupy the larger part of the second floor when the building is completed. The third and fourth floors and the balance of the second will be available for renting as office space.



Service station under construction by the Standard Oil Co. of New Jersey in Washington, D. C.

ECUADOR PLANNING NEW OIL MONOPOLY

WASHINGTON, D. C., Aug. 22.—The effort of the Republic of Ecuador to build up a local monopoly in the sale of domestic petroleum products is seen in an executive decree dated July 16, information of which has just been received here, prohibiting the importation of crude oil and products of petroleum unless their price rises above a stated level. It is a form of protective tariff duty not known in the United States.

The decree prohibits imports of crude petroleum, Diesel oil, gas oil, kerosene, gasoline, and benzine unless they are sold in Ecuador for wholesale and retail prices equivalent to the following, stated in American money:

Crude oil 4.6 cents per gallon; Diesel oil, wholesale, 5.2 cents per gallon; Diesel oil, retail, 7.2 cents per gallon; gas oil, wholesale, 2 cents per gallon; gas oil, retail, 2.4 cents per gallon; kerosene, wholesale, case of 10 gallons, $2.90; kerosene, retail, case of 10 gallons, $3.10; gasoline, wholesale, case of 10 gallons, $3.30; gasoline, retail, case of 10 gallons, $3.50; gasoline, in bulk, wholesale, 2.8 cents per gallon; benzine, wholesale, 2 cents per gallon; benzine, retail, 2.4 cents per gallon.

This decree will affect the business of an American importer into Ecuador, the company affected being an importer into that country of large quantities of gasoline, kerosene and gas oil from Peru. These products do not come to Ecuador from the United States. The decree does not affect fuel oil.—C. E. K.

SOVIET OFFERS GASOLINE FOR URUGUAY LIVESTOCK

NEW YORK, Aug. 22.—The exchange of breeding animals, hides and other animal products for cheap Russian gasoline is being seriously considered by the Uruguayan authorities, and a bill authorizing a formal agreement will be studied at the next meeting of the National Administrative Council, which in Uruguay exercises most of the administrative functions usually exercised by presidents.

Soviet representatives have offered gasoline in unlimited quantities at 3.1 Uruguayan cents per litre, delivered at Montevideo, which at present exchange rates is equivalent to 5.5 American cents per gallon. The tariff would bring the cost to about 10.8 American cents per gallon.

The member of the council who presented the project pointed out that tremendous savings would be possible both for the government and private consumers in view of the fact that Uruguay last year imported 26,752,000 gallons of gasoline.

RETURN TO 4-CENT TAX

By September 15, revenue from the 1 cent additional gasoline and motor fuel tax will have repaid the state treasury $600,000 appropriated for emergency relief last winter, Melvin Cornish, Oklahoma tax commission chairman, reports.

"The income not only will have absorbed the $600,000 but will take up the $400,000 set aside for emergency relief during the present year," he said.

After September 15, receipts from the 1-cent tax will go entirely to the state highway consturction and maintenance fund.

As the last legislature added the 1-cent tax as an emergency measure, it will be collected only until December 31, when the State will return to its 4 cents a gallon schedule. Revenues which may go to the construction fund the remaining 3½ months of the year are expected to approximate $1,680,000.

TAX EVASION SCHEME

Numerous means of evading the Oklahoma gasoline tax is being uncovered by investigating agents working under the tax board. The fact the law provides a tax refund to farmers has aggravated the problem of detecting tax evasion. A case recently uncovered shows that a farmer who purchased 55 gallons of gasoline was asked to sign a statement covering the purchase of 1,000 gallons. He did this after being told the additional amount was to cover future purchases. Since no contract was made the move was interpreted as one means of evading full payment of the tax on the part of the dealer, for the balance of the gasoline which apparently was generally distributed to motorists. Agriculture exemptions in June showed an increase of 2,500,000 gallons and indicated that one-fifth of the total gasoline consumption in the State went to farmers under the exemption.

CANADIAN IMPORT REGULATIONS

CHATHAM, Ontario, Aug. 24.—It is understood that new regulations governing the importing of gasoline into Canada are now being considered by the federal government. The new regulations, which involve a new and drastic basis of valuation for distress gasoline imports, are expected to seriously curtail the entry of this product.

SITUATION IMPROVING IN EASTERN AREA

(Continued from Page 87)

the past week, although indications pointed to a possible spurt on clean tonnage, transatlantic.

Fixtures reported during the week were as follows:

Motorship Oilreliance (British) 7,900 tons maximum, Constanza, 6s 9d; Black Sea, 7s; two ports, Black Sea, 7s 6d; option Constanza and one Black Sea port, 7s 6d; U. S. Gulf, 9s; Tampico, 10s; Curaco, 8s 6d to one port French Atlantic, charters' option two ports, 6d extra, September 20/ October 10 cancelling.

Motorship Strix (Norwegian), 3,719 tons net, Black Sea to U.K. 7s, end September loading.

Motorship Nautilus (Italian) 1,298 tons net, gas oil, Constanza to Italy, 8s, basis two ports discharge, October loading.

Motorship Attila (Norwegian), 4,279 tons net, Black Sea to Durban, lump sum 6,500 pounds sterling, August-September loading.

Steamer Katendrecht (Dutch), 6,500 tons, clean, Gulf Rouen, 9s, option north Atlantic loading, 7s 10½d, September 15-October 15.

KANSAS FIELDS

(Continued from Page 35)

ler, NW cor. SE NE, Section 30-26-5, is rigging up.

Chase County

Kingwood Oil Co.'s No. 2 Elliston, C SE SE, Section 21-19-6, has been completed for 900,000 feet of gas in sand 515-31 feet.

Cowley County

Sooby and the Prairie Oil & Gas Co.'s No. 2 Bowman, CNL SE, Section 8-32-5, has been abandoned at 740 feet. Home Natural Gas Co.'s No. 1 Stevenson, C SW NE, Section 24-33-5, is dry and abandoned at 615 feet.

Ellsworth County

Derby Oil Co. and Aladdin Petroleum Co. made location for No. 1 Stottenberg, SE cor. SW NW, Section 22-16-10w. Hipple & Palmer made location for No. 1 Phelan, SE cor., Section 2-17-10w.

Franklin County

Fields and others' No. 1 Usher, SE cor., Section 35-16-17, is dry and abandoned at 1,185 feet.

Greenwood County

Phillips Petroleum Co. and others moved a machine in for No. 8 Beal, NE cor. SE NE, Section 28-23-11. No. 7 Beal, SE cor. NE, Section 28-23-11, has been completed for 400 bbls. in sand 1,893-1,954 feet.

Haskell County

Trees and others made location for No. 1 Warner, C SE, Section 29-30-34w.

McPherson County

Lario Oil & Gas Co. and Shell Petroleum Co.'s No. 1 Boal, SE cor. NW, Section 24-19-2w, is rigging up to deepen from 2,948 feet. Darby Petroleum Co. and Shell Petroleum Corp.'s No. 2 Kaegi, SW cor. SE NE, Section 20-19-1w, has been completed for 45,000,000 feet of gas in chat 2,916-57 feet. W. C. McBride, Inc.'s No. 2 Whitwright, NW cor. SW, Section 30-19-1w, made 2,562 bbls. potential from sand 3,406-22 feet. Beard Drilling Co. and Tidal Oil Co.'s No. 1 Day, SW cor. NW SW, Section 32-19-1w, has been completed for 3,000,000 feet of gas in chat 2,935-63 feet after plugging back from 3,528 feet in Silicious lime. McPherson Oil & Gas Development Co. and Shell Petroleum Corp.'s No. 2 Fleming, C NW NW, Section 11-19-2w, made 7,770,000 feet of gas from chat 2,914-47 feet. No. 4 Meyers "B," C SW SE, Section 14-19-2w, has been completed for 6,500,000 feet of gas in chat 2,884-2,928 feet. Plains Oil Co. and Shell Petroleum Corp.'s No. 1 Unruh, NW cor. NE, Section 6-20-1w, made 1,156 bbls. from Viola lime 3,412-30 feet. Ritz Oil & Gas Co. and Shell Petroleum Corp.'s No. 1 Koehn, SE cor. NE, Section 16-21-3w, has been completed for 360 bbls. in chat 3,015-74 feet.

Rice County

Slick, Pryor and Lockhart made location for No. 3 Schurr, NW cor. NE SW, Section 21-20-10w, Schurr Pool. Mid Field Oil & Royalty Co. is moving in tools for No. 1 Brown, NW cor., Section 10-21-6w.

Sedgwick County

Continental Oil Co.'s No. 1 Nagel, SE cor. NE NW, Section 19-27-2, is rigging up, to deepen from 2,993 feet. Magnolia Petroleum Co.'s No. 5 Wheeler, SW cor. NE NE, Section 19-27-2, has been completed for 880 bbls. in Viola lime 3,255-59 feet.

Stevens County

Texas Interstate Pipe Line Co. and McNabb's No. 1 Renfrew, C SE, Section 7-33-37w, has been shut in for 2,000,000 feet of gas in sand 2,562-2,750 feet.

OKLAHOMA FIELDS

(Continued from Page 34)

bbls. water; No. 4 Mae Knox, 9,196 bbls. oil 6,128 bbls. water; No. 1 Magnolia Heights, 3,244 bbls. oil, 171 bbls. water; No. 1 A. Precure, 6,675 bbls. oil, 102 bbls. water; No. 1 Resimer, 2,521 bbls. oil, 514 bbls. water; No. 4 Spillman, 5,788 bbls. oil, 18,323 bbls. water; No. 3 Trosper, 1,163 bbls. oil, 951 bbls. water; No. 4 Trosper, 9,463 bbls. oil, 4,053 bbls. water; No. 6 Trosper, 943 bbls. oil, 628 bbls. water; No. 7 Trosper, 7,226 bbls. oil, 250 bbls. water; No. 1 Clarence Trosper, 10,376 bbls. oil, 15,564 bbls. water; No. 3 Clarence Trosper, 14,984 bbls. oil, 2,042 bbls. water; No. 4 Clarence Trosper, 5,928 bbls. oil, 2,305 bbls. water; No. 2 Elizabeth Trosper, 9,928 bbls. oil, 4,944 bbls. water; No. 2 H. G. Trosper, 8,309 bbls. oil, 17,653 bbls. water; No. 2 H. G. Trosper, 10,564 bbls. oil, 15,846 bbls. water; No. 5 H. G. Trosper, 4,341 bbls. oil, 482 bbls. water; No. 6 H. G. Trosper, 2,987 bbls. oil, 8,955 bbls. water; No. 7 H. G. Trosper, 1,415 bbls. oil, 2,627 bbls. water; No. 1 Lillie Trosper, 4,370 bbls. oil, 135 bbls. water; No. 1 Holmes-Gray, 1,914 bbls. oil, 1,030 bbls. water; No. 1 Jones Community, 19,792 bbls. oil, 5,260 bbls. water; No. 2 Jones Community, 13,117 bbls. oil, 4,370 bbls. water; No. 4 Jones Community, 4,855 bbls. oil, 7,278 bbls. water.

I. T. I. O. Silicious Lime Wells

No. 2 Alice Bodine, 192 bbls. oil, 4,960 bbls. water; No. 3, 2,452 bbls. oil, 2,750 bbls. water; No. 4, 2,484 bbls. oil, 2,650 bbls. water; No. 5, 377 bbls. oil, 3,000 bbls. water; No. 6, 692 bbls. oil, 5,572 bbls. water; No. 1 Bodine-Anderson, 252 bbls. oil, 3,580 bbls. water; No. 3 A. Brokaw, 144 bbls. oil, 1,300 bbls. water; No. 2 C. Brokaw, 3,641 bbls. oil, 1,000 bbls. water; No. 3, 7,095 bbls. oil, 4,025 bbls. water; No. 4, 12,814 bbls. oil, 2,500 bbls. water; No. 2 G. Button, no oil, 4,800 bbls. water; No. 3, no oil, 3,000 bbls. water; No. 4, 1,163 bbls. oil, 2,380 bbls. water; No. 5, 417 bbls. oil, 6,310 bbls. water; No. 1 Canfield-Button, 264 bbls. oil, 2,400 bbls. water; No. 2 Canfield-Button, 1,305 bbls. oil, 5,730 bbls. water; No. 1 L. Canfield, 407 bbls. oil, 1,700 bbls. water; No. 3 E. Fortson, no oil, 1,560 bbls. water; No. 3 Fortson-Farley, no oil, 3,018 bbls. water; No. 1 Hiddleston, 7,027 bbls. oil, 56 bbls. water; No. 1 Jennings, 1,250 bbls. oil, 7,500 bbls. water; No. 2, 1,936 bbls. oil, 6,000 bbls. water; No. 3, 4,087 bbls. oil, 4,850 bbls. water; No. 3 Thomas-Fuzzell, 160 bbls. oil, 5,850 bbls. water; No. 1 Verne, no oil, 1,680 bbls. water; No. 2 Wheeler, 3,018 bbls. oil, 20,650 bbls. water; No. 3 Wheeler, 3,019 bbls. oil, 4,040 bbls. water; No. 1 Farley-Fuzzell, 1,289 bbls. oil, 3,000 bbls. water; No. 2 Farley-Fuzzell, 11,413 bbls. oil, 5,500 bbls. water; No. 1 L. Farley, 1,916 bbls. oil, 4,440 bbls. water; No. 3, 4,653 bbls. oil, 2,150 bbls. water; No. 4, 15,201 bbls. oil, 10,000 bbls. water No. 1 Mabel Fuzzell, 739 bbls. oil, 2,500 bbls. water; No. 2, no oil, 10,000 bbls. water; No. 3, 1,446 bbls. oil, 3,545 bbls. water.

Mid-Kansas Oil & Gas Co.

No. 2 J. Browning, 60 bbls. oil, 1,200 bbls. water; No. 1 W. P. Fortson, 70 bbls. oil, 1,500 bbls. water.

Wirt Franklin Petroleum Corp.

No. 1 Theimer, 30 per cent water; No. 4, 14 per cent water; No. 5, 50 per cent water; No. 6, 60 per cent water; No. 9, 50 per cent water; No. 10, 2 per cent water; No. 11, 3 per cent water; No. 13, 60 per cent water; No. 5 Lowery, dead; No. 6, 50 per cent water; No. 9, 40 per cent water; No. 10, 60 per cent water; No. 1 Eacock, 10 per cent water; No. 1 Theimer-Butterfield, 10 per cent water.

Cromwell-Franklin Oil Co.

Nos. 1, 3, 4, 5 Trosper Park, all dead: No. 6, 30 per cent water; No. 7, 20 per cent water; No. 8, 30 per cent water; No. 9, 40 per cent water; No. 19, 9 per cent water; No. 21, 40 per cent water; No. 22, 45 per cent water; No. 30, 10 per cent water.

Field Operations

Following the increase in crude oil prices in Oklahoma during the last part of last week six tests were expected to be completed in the Oklahoma City Field. A busy week was expected as several wells were drilling the cement plugs on the last string of casing.

Skelly Oil Co.'s No. 1 Spencer, NW cor. NE NW SE, Section 15-11-3w, on the west edge of the field was completed flowing 8,183 bbls. of oil in five hours, filling all the storage on the lease. The gas was estimated at 35,000,000 feet a day. The production was found in the Wilcox sand at a total depth of 6,494 feet.

Other wells that completed their eight-hour initial flow were: Springrose Drilling Co.'s No. 1 O'Connor, SW cor. NW NW, Section 2-11-3w, flowed a total of 4,114 bbls. of oil in 3 hours and 16 minutes after it was completed. The well flowed 1,543 bbls. of oil in 1 hour and 20 minutes before it started to cut the connections, and was shut in. The gas gauged at the rate of 125,000,000 feet a day. It also produced considerable sand. Phillips Petroleum Co.'s No. 1 Reserve, NW cor. NE, Section 3-11-3w, near the city in the north end of the field, was open 3 hours and 48 minutes flowing 9,013 bbls. of oil, making a total of 16,194 bbls. of oil in eight hours. It was producing from the Wilcox sand at 6,307-6,491 feet. The same company's No. 1 Leverish, NE cor. SE SW, Section 10-11-3w, flowed 1,130 bbls. of oil the first hour with 21,000,000 feet of gas a day.

A check of the number of Wilcox sand wells producing in the Oklahoma City Field showed a total of 116 producers that have taken potential gauges. Besides these there are approximately 60 other wells that have been drilled into the Wilcox sand that have been completed since the last potential gauge was taken. These wells are shut in waiting their 65-day shut-in period.

The 116 wells showed a monthly allowable of 4,483,870 bbls. of oil and a daily allowable of 144,640 bbls.

Test in Murray County

Another test has been announced for Murray County, P. Boyle and others' No. 1 Cutchall, C SE NE Section 6-1-2, about 6½ miles north of the townsite of Davis. The test is being drilled on a block of 220 acres and is located about a mile and a half north of a well in the NW cor. Section 17-1-2, which was drilled about a year and half ago, and which showed oil and gas at 2,100-15 feet and again at 2,245-75 feet. It was later abandoned at a total depth of 2,495 feet.

In the southern part of the State the enforced shutdown of the flush areas has had a tendency to slow down drilling activities. The Tatums Pool, in Carter County, which has been shut in by the governor's executive order, has only one active operation, and it is expected this test will be shut down in a few days.

The Carter Oil Co.'s No. 4 Wirt Franklin, C NE NE Section 24-1s-3w, has cemented casing on top of the oil sand at 1,860 feet. The sand was drilled to a total depth of 2,113 feet. The operators expect to wait the full proration period before drilling out the cement plugs.

K. D. Drilling Co. and Frank Gouin's No. 1 M. E. Burton, C S half of SW Section 30-1s-2w, a new producer a half mile south of production in the Tatums Field, which was completed for 130 bbls. of oil in five hours was shut in until the shutdown order of Governor Murray is lifted. The oil was found in a series of sands at 2,216-2,400 feet, and the well is estimated at 400 bbls. a day.

The oil operators of southern California petitioned directors of the Carter County Producers Association to enlarge their district to include four additional counties. At a general meeting held in Ardmore August 22 it was decided by the operators that the producers in Grady, Cotton, Stephens and Garvin Counties be asked to join the association. Three associations were represented at the meeting, Southern Oklahoma Oil and Gas Association, Carter County Producers Association and the operators advisory committee.

Greater Seminole Production

The production from the Greater Seminole area for the week ending August 21, was approximately 73,525 bbls. The first 12 pools listed below comprise the Seminole area which averaged 43,980 bbls.

Pool—	Bbls.
Little River	10,555
East Little River	1,675
Carr City	5,435
Maud	935
Mission	1,810
Bowlegs	4,965
Earlsboro	8,510
South Earlsboro	3,425
East Earlsboro	2,065
Seminole	1,030
East Seminole	1,035
Searight	2,540
Total	43,980
Allen	6,725
Asher	395
Wanette	3,320
Konawa	3,570
Sasakwa	1,810
St. Louis-Pearson	13,725
Total	73,525

Oklahoma City Shipments

The total shipments from the Oklahoma City Field for the week ending August 22 were 78,507 bbls. The shipments decreased 43,595 bbls. from the previous week. The shipments by companies were as follows:

Company—	Bbls.
Empire	5,482
Continental	5,309
Magnolia	47,403
Prairie	928
I. T. I. O.	4,486
Sinclair	5,736
Century	5,588
Anderson & Prichard	1,547
Operators	388
Wilcox	1,640
Total	78,507

The daily production and pipe line shipments from the Oklahoma City Field for the week ending August 22, were as follows:

Date—	Prod.	Wells	Shipments
August 16	2,203	11	8,706
August 17	2,116	11	12,682
August 18	18,062	11	13,965
August 19	12,361	10	12,990
August 20	20,505	11	12,593
August 21	680	9	9,454
August 22	8,021	11	7,541

Muskogee County

J. L. Haner and others' No. 6 M. Steadham, NW cor. NE NE SE, Section 8-15-18, has been completed for 7,069,780 feet of gas in sand 1,580-85 feet. Bryan Petroleum Co.'s No. 1-A J. Cherry, SW cor. SE NE SE, Section 15-14-16, made 890,000 feet of gas in sand 585-630 feet. E. Price's No. 1 L. Green, CSL SW, Section 20-14-17, has been abandoned at 1,776 feet. H. E. Dowd's No. 1 Long, C NW NW, Section 26-10-19, is a dry hole at 1,250 feet.

Oklahoma County

Anderson & Prichard and Plains Petroleum Co. has the cellar dug for No. 1 South Highland, SE cor. NW SE NE, Section 10-11-3w, Oklahoma City Pool. Ocate Oil Co. made location for No. 1 Smith, NE cor. NW, Section 15-11-3w. Shaffer and others' No. 1 Deterding, NW cor. NE NW SW, Section 10-11-3w, has been completed for 6,679 bbls. in 10¼ hours from Wilcox sand 6,455-6,538 feet.

Okmulgee County

Kirkland & Son's No. 6 E. Brown, C SW SW, Section 9-15-13, has been completed for 5 bbls. in Wilcox sand 2,488-96 feet.

Pittsburg County

Utilities Production Co.'s No. 5 C. Bascom, SW cor. SE SW, Section 10-7-18, is drilling at 110 feet. J. E. Weible's No. 1 Belt, NE cor. NW NW SE, Section

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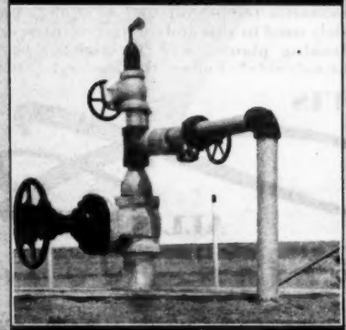

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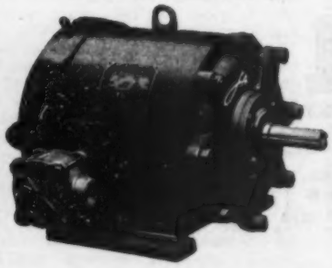

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5-8-16, has been completed for 1,000,000 feet of gas in sand 368-455 feet.

Pontotoc County

Stanolind Oil & Gas Co.'s No. 2 Roberts, NE cor. SW NE, Section 32-5-5, Bebee Pool, has been completed for 264 bbls. in Simpson sand 2,503-27 feet.

Seminole County

Magnolia Petroleum Co.'s No. 3 Billington, SW cor. SE NW, Section 29-6-6, Konawa Pool, has been completed for 259 bbls. in sand 2,750-59 feet, total depth 2,762 feet.

Stephens County

George L. Pace and others' No. 1-B Toney, NW cor., Section 27-2s-7w, is rigging up.

Wagoner County

C. D. Bradley's No. 1 S. Kernal, NW cor. SW NE, Section 7-15-17, has been completed for 8,277,000 feet of gas in sand 1,013-28 feet.

EAST TEXAS FIELDS UNDER MILITARY RULE

(Continued from Page 13)

producing wells, and homes in the fields which have been using gas from the wells for domestic purposes are now cooking over improvised stoves outside of the houses, or have put in other kinds of cook stoves, for wells are not even opened enough to allow enough gas to be produced for such purposes. This might be considered a hardship by those who have been accustomed to using the handy commodity, but as the shutdown will not last long, and the weather is not severe, this is really no hardship.

Drilling wells which have been powered by gas from producing wells on nearby leases have had to be shut down until other fuel could be obtained, new power installed, or until the shut-in wells are again opened, and gas produced with the oil. The lack of gas has resulted in many wells being temporarily shut down, making the fields comparatively silent and having an abandoned appearance. Wells which have been drilling with oil from producing wells have encountered the same fate as those which had been using gas, and those powered by fuel oil from some of the smaller refineries have found that source of supply also shutoff as the plants were shut down.

Driving through the fields at night gives a person an idea as to the comparatively few wells drilling, and the large flambeaus which heretofore have been sending their flares up through the clearings and tree tops to illuminate the surrounding forests and hillsides, are now extinct, having been snuffed out as the wells were shut in. Where the fields formerly could be readily seen at night from many miles distant, the snuffing out of the flares has laid a shroud over the district, and now the only illumination ascending from amongst the piney woods comes from the electric lights which festoon the few rigs which continue to run, oblivious to the general shutdown around them.

There are a few who are trying to preach that a shutdown will be ruinous to the wells, whereas before they probably have been saying that flowing wells wide open, as has been the case in the district, has been harmful to the wells and areas, and has been causing the pulling in of salt water, which it surely has. Such a shutdown is preventing these harmful practices, and when the wells

Brigadier General Jacob F. Wolters who is in command of the troops in the East Texas fields. General Wolters is also in the legal department of The Texas Company.

are again opened, but under curtailed amounts, the water will be held down because of pinching the wells, and the gas pressures in the field will be saved instead of dissipated as has been the case heretofore.

Railroads Affected

The scarcity of trainloads of tank cars, going out of the district, is very noticeable to those who have been witnessing hundreds of cars pounding over the rails every day carrying thousands of barrels of oil to points as far north as Canada, to refineries in other parts of Texas, and to neighboring states. Cars are standing idle on the many switches which have been constructed by the three serving roads during the last six months.

Trunk pipe line shipments from the district also dwindled during the week, the only oil available for transportation being the oil in steel storage throughout

National Guard troopers in mess line at General Headquarters Camp just south of Kilgore. It is real army life for these men. Note the one with the shaved head. East Texas mosquitoes should have a time with him.

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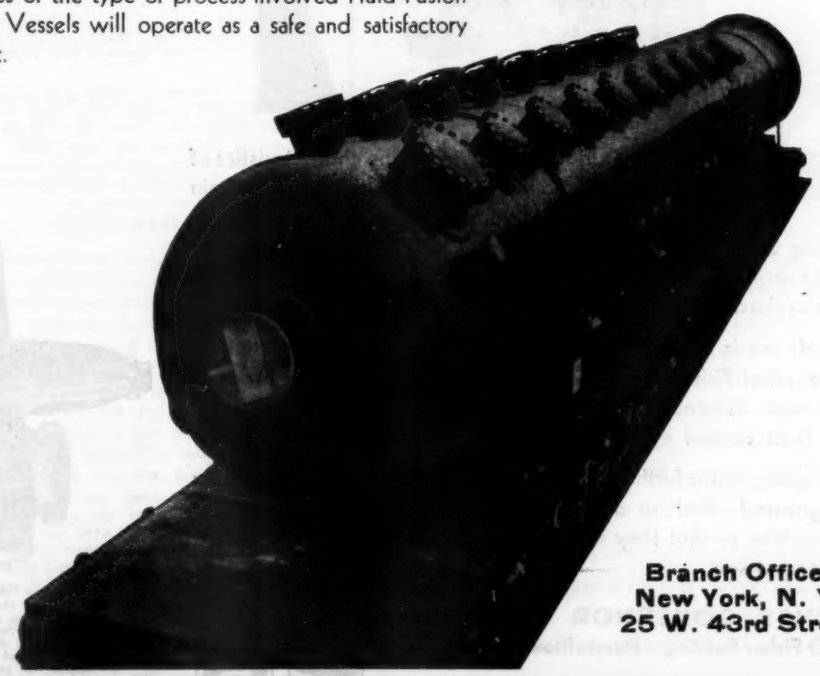

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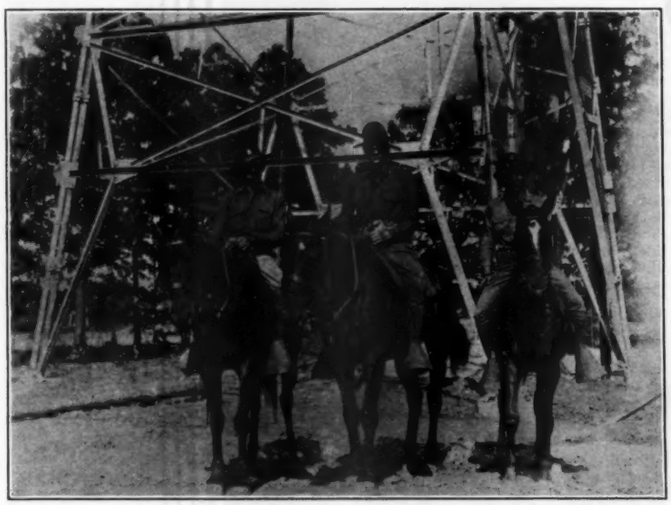
the district, which amounts to an estimated 3,500,000 bbls. Approximately half of this had been run during the week, leaving around 1,700,000 bbls. still in field storage. This storage is now being closely guarded.

A great decrease in traffic on the highways and roads within the district is another very noticeable thing. The number of trucks on the highway has dwindled to a safety limit.

Several small refineries have been proposed for the district, and more loading racks have been contemplated, but the complete shutdown has temporarily demoralized such plans, and as the district will only be allowed to produce under curtailment orders when it is reopened to production, it may result in such plans being abandoned, the present number of local refineries, the vast number of loading racks and the great capacity of the trunk lines having far more than enough outlet to accommodate the daily allocated average of the fields.



Three troopers on patrol in the East Texas oil fields. Picture taken on Tidal Oil Co.'s Irion lease in the Joiner Pool. National Guard Cavalry patrol East Texas on horses, having over 1,600 wells to check, and a producing area of around 600 square miles.

IMPORTS DECREASING CONTRADICTING RUMOR

AUSTIN, Tex., Aug. 24.—Gov. Ross S. Sterling received the following telegram from Earle Freeman, Dallas:

"Importation of crude oil increased 1,000,000 bbls. the past week. It can readily be seen that anticipated curtailment in East Texas effected increased exports, therefore troops on the Atlantic seaboard to curtail imports would be more beneficial to the American people, especially in Texas, with exception of a selected few."

Governor Sterling sent the following telegram to W. C. Teagle, president of the Standard Oil Co. of New Jersey:

"Complaints are being filed with me to the effect that the importation of crude oil is being greatly increased the last few weeks. If this is true it will hamper to a great degree the efforts being made in Texas to conserve our natural resources."

Following reply reached Governor Sterling from E. J. Sadler, vice president of the Standard of New Jersey:

"Replying to your telegram to W. C. Teagle in his absence, according to our best information, imports of crude and products into the United States from all sources averaged slightly over 9,000,000 bbls. monthly in the year 1929. In 1930 the average was about 8,800,000 bbls. monthly; and for the first six months of this year slightly under 7,500,000 bbls. monthly. July imports were approximately 6,500,000 bbls., and best indication at the present time is that August imports will total about 6,000,000 bbls.

"We have no information indicating that imports of crude or products is likely to increase materially. In so far as our own company and its subsidiaries are concerned, we imported about 21,000,000 bbls. of crude and products, but no gasoline, in 1928. In 1930 our imports were a trifle over 22,000,000 bbls.; and for the first seven months of the present year this company and its subsidiaries imported slightly over 12,200,000 bbls. of crude and products. During none of these years did we import any gasoline.

"The program under which this company is working at present would limit its imports for the year 1931 to the figure of 1928, namely, 21,000,000 bbls.

"We trust the foregoing information covers your question, and if not that you will advise us of your further wishes."

GULF COAST MARKET

HOUSTON, Tex., Aug. 24.—The shutdown of the East Texas Field early last week followed later by general advances in crude has been reflected sharply in strengthening of Gulf Coast refinery markets. Gasolines have been marked by almost sensational price gains.

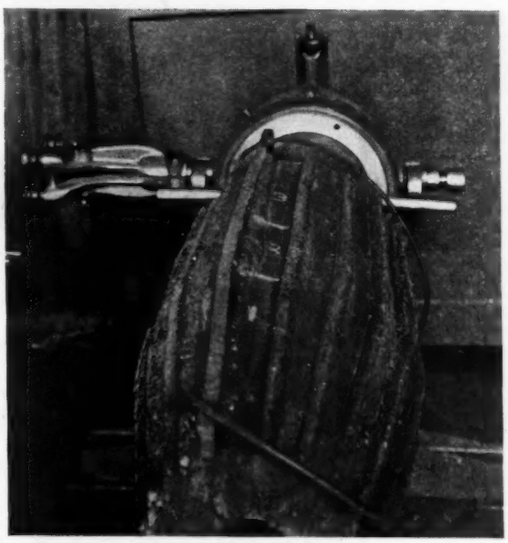
Pale and red oils, which have just recovered from a long period of price cutting in competitive areas, have been placed in line for price increases although as yet the bullish market has resulted mainly in a stronger situation. Gas oils have been boosted slightly aided by the approach of the furnace oil season. Fuel oil has been the only product so far unchanged although this has not been so freely offered and price improvement is expected.

The market turn has caught Coastal refiners with comparatively little gasoline on hand and consequently sellers have been supported in higher prices. Although the market is moving upward constantly 5½ to 6 cents was believed representative of tank car sales at the opening of the week. Some scattered small lots were quoted under that figure but such sales were becoming fewer and at the same time 6-cent quotations were becoming more frequent. Postings on bulk gasolines, which last week were slow to reflect the stronger market, now have been boosted to 5 cents on U. S. Motor material.

In view of expected further strengthening of prices refiners here have virtually ceased future selling and now are quoting for immediate shipments only.

With several sources of supply sold up for as much as six months and with the furnace oil seasonal buying at hand gas oil also was quick to respond to the bullish control. Little gas oil was quoted below 2½ cents with the market quoted at 2½ to 3 cents.

*Flux Coated Stoodite On Mills Or Tapered Reamers Gives Unusual Service



The reamers were first inserted in a Stoody Universal Bit Holder which enabled the welder to do an accurate job of welding and to do it with the utmost ease. The reamers were then defaced which removed all the old hard surfacing metal. Then the flutes were built up with Stoody High Carbon rods and afterward faced with Flux-coated Stoodite.

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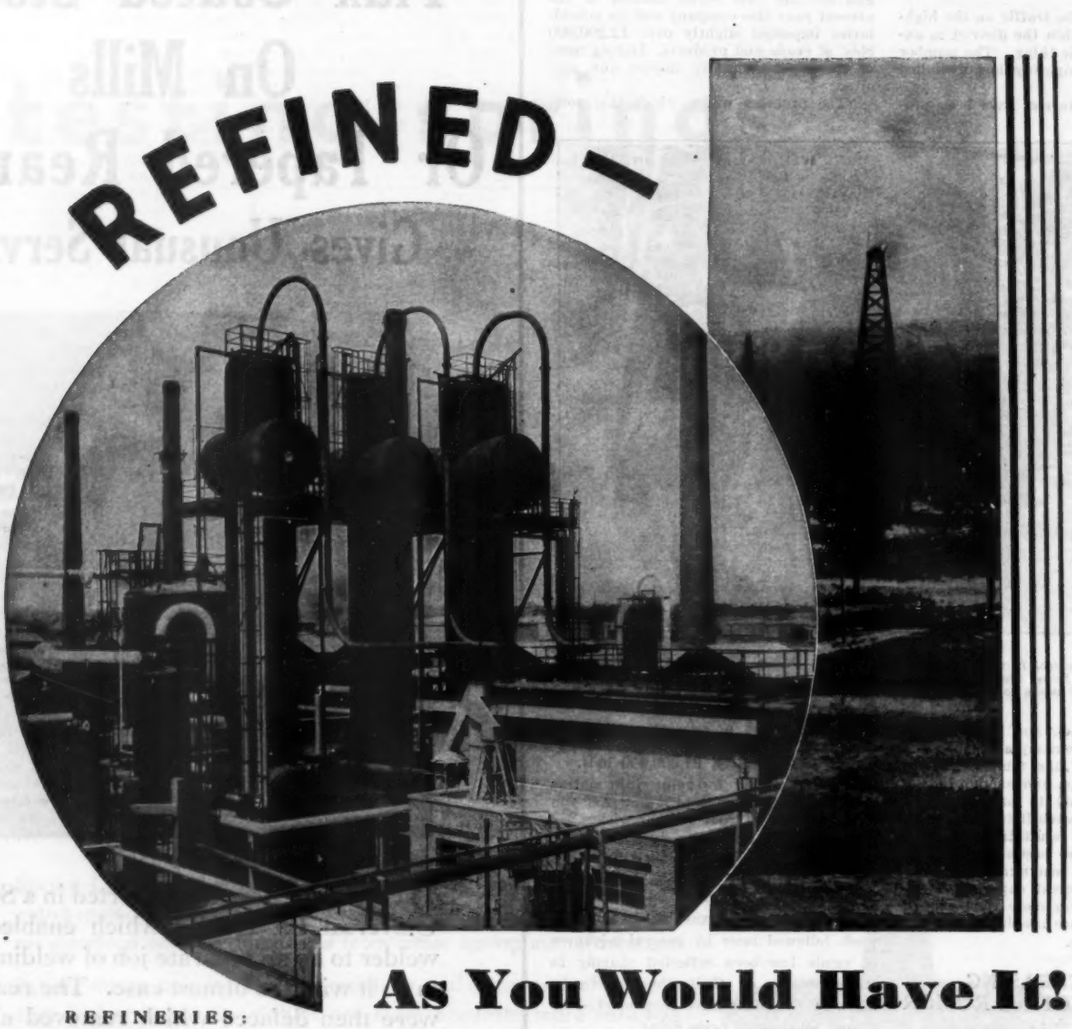

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CRUDE SHORTAGE BRINGS HIGHER MARKET PRICES IN MANY FIELDS

By James McIntyre

With the exception of California and the eastern fields of New York, Pennsylvania, West Virginia and southeastern Ohio, every producing division in the United States was treated to a substantial crude oil price increase in the past week. Several different sets of prices were posted in Oklahoma, Kansas and Gray County, Texas, as the Phillips Petroleum Co. and the Magnolia Petroleum Co. each posted prices of its own regardless of what other leading buyers quoted. The Phillips Petroleum Co.'s Oklahoma schedule, effective August 24, starts at $1 per barrel for crude oil of 40° or above and 2 cents less for each degree under 40. The price is 30 cents higher on each degree than the posted prices of the Texas, Stanolind, Sinclair, Gypsy and other leading buyers. The Phillips posted 72 cents for crude of 40 gravity and better in the Gray County, Texas, Field, or 14 cents above other leading buyers, while in Carson, Hutchinson and Moore Counties, Texas, its posting of 60 cents for 40 gravity and over with its 2-cent differential downward was 7 cents higher on each degree than other buyers. Up to this writing only one company had met any of the Phillips Petroleum Co.'s prices, that being the Wilcox Oil & Gas Co. in the Gray County, Texas, Field.

The Texas Company Led the Van

After much speculation as to which company would increase the price of oil in the Mid-Continent following the declaration of martial law by Governor Murray of Oklahoma in prorated fields in that State and Governor Sterling in the East Texas Field, The Texas Company on Friday announced that effective on Saturday, August 22, it would pay the following prices for oil in Oklahoma, North Texas, Central Texas and North Louisiana: Below 29 gravity, 46 cents; 29 gravity, 48 cents, with 2 cents added for each additional degree up to and including 40 and above, which was posted at 70 cents; in the Gulf Coast, below 25 gravity, 55 cents; 25 gravity, 56 cents, with 1 cent added for each additional degree up to and including 40 and above, which was posted at 71 cents; in Gray County, Texas, below 35 gravity, 46 cents; 35 gravity, 48 cents, with 2 cents added for each degree up to and including 40 and above, which it posted at 58 cents; in Carson and Hutchinson Counties, Texas, below 35 gravity, 41 cents; 35 gravity, 43 cents, with 2 cents added for each degree up to and including 40 and above at 53 cents. The same company posted Markham, Texas, at 52 cents, a 15-cent advance; Darst Creek, Texas, 52 cents, a 15-cent advance; Smackover, Arkansas, 52 cents, a 15-cent advance, and Winkler, Crane and Upton Counties, Texas, and Lea County, New Mexico, 35 cents, a 10-cent advance.

The average increase in price in Oklahoma, North Central Texas and North Louisiana was 24 to 26 cents per barrel. In the Gulf Coast Field the advance was 15 cents per barrel on all grades.

The company ceased posting in the East Texas Field some time ago, and in its announcement on Friday made no reference to price in that field.

Almost immediately after the posting of The Texas Company's prices the Skelly Oil Co., which buys oil only in Kansas, applied The Texas Company's Oklahoma prices to Skelly purchases in Kansas.

Adopted Without Delay

The Stanolind Crude Oil Purchasing Co., effective August 22, adopted The Texas Company prices for Oklahoma and North Central Texas, applying them also to Kansas and to East Central Texas (the Mexia-Powell area). The Carter Oil Co. adopted the schedule in Oklahoma and Kansas; the Empire Pipe Line Co. in Oklahoma and Kansas; the Wilcox Oil & Gas Co. in Oklahoma and Gray County, Texas Panhandle, fields; the Pure Oil Co. in Oklahoma; the Vickers Petroleum Co. in Kansas; the Derby Oil Co. in Kansas; the Eldorado Refining Co. in Kansas; the Gypsy Oil Co. in Oklahoma; the Humble Oil & Refining Co. in North Central Texas and East Central Texas (the Mexia-Powell area), Gray County, Texas, Hutchinson and Carson County, Texas, the Gulf Coast including Goose Creek, Hull-Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble and Refugio light crude. In the Gulf Coast, however, the Humble's prices differ from the Texas in that the Humble schedule stops at 35 gravity and above at 66 cents, while The Texas Company's 1-cent differential continues on up to 40 gravity and above at 71 cents. The Humble posted Refugio heavy at 60 cents; Mirando 60 cents; Pettus 70 cents; Salt Flat 52 cents, and Darst Creek at 52 cents; and Crane, Upton, Crockett, Ector, Howard, Glasscock, Pecos and Winkler Counties at 35 cents, and Lea County, New Mexico, at 35 cents.

The Gulf Pipe Line Co. adopted The Texas Company and Humble Oil & Refining Co. prices in Texas.

The Champlin Refining Co. on August 22 posted 48 cents for 29 gravity oil in Oklahoma, with a 2-cent differential for each degree upward to and including 40 degrees and above at 70 cents.

Louisiana-Arkansas

The Standard Oil Co. of Louisiana on August 24 posted the following prices in Caddo, Homer, Haynesville, Bull Bayou, Sabine, Crichton, DeSoto, Sarepta and Carterville, Louisiana, and El Dorado, Arkansas: Below 29 gravity, 46 cents; 29 gravity, 48 cents, with 2 cents added for each degree upward to 40 and above at 70 cents. Smackover was posted at 45 cents. Urbana posting was discontinued. The Gulf Refining Co. posted similar prices but posted Calion, Arkansas, at 52 cents and made its prices effective August 22. The Magnolia Petroleum Co. effective August 24 posted the following prices for North Louisiana and Arkansas: Bull Bayou, Louisiana, 68 cents; Haynesville, Louisiana, 50 cents; Pine Island, Louisiana, 58 cents; Cotton Valley, Louisiana, 46 cents; Smackover, Arkansas, 45 cents; El Dorado, Arkansas, 48 cents; Rainbow, Arkansas, 48 cents; El Dorado east field, 45 cents.

Magnolia's Northern Schedule

The Magnolia Petroleum Co. on August 22 posted the following prices in Texas and Oklahoma: East Central Texas, which includes only Mexia, Wortham, Corsicana light, and Panola County, 64 cents; Lytton Springs, 64 cents; Gray County, 58 cents; Carson and Hutchinson Counties, 51 cents; Crane, Upton, Howard, Glasscock and Mitchell Counties in West Texas, 35 cents; Mirando, 60 cents; Darst Creek, 52 cents; Luling, 34 cents; Corsicana heavy, 34 cents. In Oklahoma, Cushing, Yale, Oklahoma City, Morrison, Wewoka and Seminole, 68 cents; Cement, Duncan and Walters, 60 cents; Healdton, 37 cents; Hewitt and Graham, 52 cents; North and Central Texas including only Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden, 68 cents; East Texas, 68 cents. The Magnolia's new posted price in East Texas is the highest posted price yet accorded that high-grade oil field where oil has been sold all the way from 2½ cents up to 67 cents per barrel.

Rocky Mountain Benefits

The Midwest Refining Co. on August 24 posted new prices in the Rocky Mountain fields as follows: Kevin-Sunburst, Montana, 90 cents; Pondera, Montana, 80 cents; Elk Basin, Wyoming, 90 cents; Grass Creek, Wyoming, 90 cents; Big Muddy, Wyoming, 68 cents; Lance Creek, Wyoming, $1.05; Rock Creek, Wyoming, 70 cents; Dry Creek, Montana, $1; Cat Creek, Montana, 90 cents; Greybull, Wyoming, 90 cents; Torchlight, Wyoming, 90 cents; Dutton Creek, Wyoming, 60 cents; Frannie light, 53 cents; Frannie heavy, 43 cents; Iles light, Colorado, 75 cents; Iles heavy, 53 cents; Hogback, New Mexico, 80 cents; Hudson, Wyoming, 65 cents; Woodson, 35 cents.

The Ohio Oil Co., effective August 24, posted Wooster, Ohio, at $1 per barrel; Lima, 90 cents; Illinois, 80 cents; Princeton, Ind., 80 cents; Western Kentucky, 75 cents, and Indiana, 50 cents. The Stoll Refining Co. on August 24 posted Hart County, Kentucky, crude at 65 cents and the Ashland Refining Co. posted 80 cents for Somerset crude in Cumberland Pipe Line Co. lines.

The Tidal Refining Co. on August 22 adopted in Oklahoma and Kansas The Texas Company's Oklahoma price schedule as did the Sinclair Refining Co. in Oklahoma.

The Ohio Oil Co. posted higher prices in Wyoming and Montana on August 24 as follows: Lance Creek, $1.05; Elk Basin, 90 cents; Grass Creek, 90 cents; Sunburst, 80 cents; Rock Creek, 70 cents; Big Muddy, 68 cents.

ADVANCE MADE IN GAS OILS AND DISTILLATES

(Continued from Page 12)

oil sales were made at 2½ cents per barrel.

This unexpected development brought lower prices in other Mid-Continent areas including the low cold test oils. Close market observers have realized that this situation was temporary and many refiners have refused to sell except on a contract basis which would give them the benefit of price advances when the market was again on a normal basis.

The shutting down of most of the East Texas refineries following the shutdown of the field with similar action in the flush fields of Oklahoma has changed the outlook for all fuels. Due to the shortage of crude oil, several refiners are competing with artificial gas companies and other buyers in the purchase of the high gravity gas oils, which they are using as cracking stock at their refineries. High gravity fuel oils are also being purchased, the refiners either charging the fuel oil to their cracking units or reducing it to secure a gas oil stock. In East Texas fields last week refinery fuel oil sold as high as 60 cents per barrel, being used as fuel in drilling wells.

No runaway market in fuels is expected by a majority of the trade regardless of what happens in the crude situation due to conditions in the buying end. Industrial conditions for the fall and winter do not point to any marked recovery in the buying of the heavy fuels and this situation tends to limit the advances possible in higher gravity grades of gas oil and distillates. The low prices prevailing for coal and the expansion of natural gas facilities at Middle Western points are other factors tending to prevent any rapid advances in fuel oil prices. However, if the shutdown plan which was responsible for the price advances of the past two weeks, is followed by an effective curtailment of flush production with the establishment of posted prices for crude oil ranging from 75 cents to $1 per barrel, most market observers believe that low cold test fuels, gas oils and distillates will be scarce during the fall and winter months with a return to normal prices in relation to crude oil and gasoline.

Gasoline and Naphtha

U. S. Motor gasoline was quoted on Monday and Tuesday at a price range of 5 to 6 cents with little spot trading at any price. With contract prices from 25 to 50 per cent less than the prevailing spot market, most jobbers are ordering the maximum quantity allowed on their contracts and have reduced their spot purchases to a minimum. Many jobbers are protected on flat purchases over the month.

Cases are cited where tank car station operators and other jobbers have shut down their stations rather than buy on the spot market. Based on a 5-cent market the tank car station operators through the Middle Western and other points, selling at cut prices, do not have any margin left by the time they pay the freight and state gasoline taxes. Several prefer to take their losses with shutdown stations rather than by continued operation.

Although the spot market has not been active, conditions point to higher prices. There are a number of buyers, including refiners as well as jobbers, who are expected to be in the market before the end of the week. At this writing, it is not known what will be the next development in regard to the continuance of Texas and Oklahoma shutdown of flush fields. Should the present situation, including the shutdown of East Texas refineries, continue over the first few days of September some market observers look for a scramble on the part of buyers to cover their September requirements. Due to a lack of crude oil supplies, additional curtailment of refinery operations will be necessary by that time and supplies of refined products will be more limited. However, if the Oklahoma shutdown order is lifted before the end of the week with a liberal proration effective in East Texas, the crude shortage would be ended and supplies of gasoline and other refined products would be more freely available than they have been for several weeks.

Trading in the higher gravity gasolines was practically at a standstill the first of the week. Refiners generally have made the same advances in these grades that they have in U. S. Motor. Naphtha prices have also been advanced.

Kerosene

The spot demand for kerosene has been strong enough in Oklahoma over the past week to allow the spot refinery sellers to advance their quotations to a low of 2 cents. Sellers are predicting a more active market should the gasoline tank wagon and service station prices be advanced 2 or more cents. The slowness of the kerosene market in recent months has been partially due to the fact that gasoline tank wagon prices exclusive of taxes were so low that they were practically the same as the kerosene tank wagon schedules. Due to this condition many users of tractors have shifted from kerosene to gasoline as fuel, gasoline usually being exempt from state taxes when the tractors are used in farm work.

Gas Oils and Distillates

The stronger gas oil and distillate has already been explained. Sales of gas oil cracking stock as high as 1¼ cents were reported although some buyers were refusing to pay more than 1 cent. The same price was effective in U.G.I. gas oil. The low cold test gas oil of dark or straw color with a flash under 190 was practically unavailable in Oklahoma at a quotation of 1¼ to 1⅜ cents. Most of the refiners who have this material are sold up on contracts.

The regular grades of distillates varying in gravity from 36 to 40 moved up to a low of 1⅜ cents with sales reported as high as 1⅝ cents.

Fuel Oil

No sales were reported in some grades of fuel oil. Sellers are asking higher prices for all grades and some buyers are awaiting additional developments before they place orders. The low for fuel oil in Oklahoma of low gravity and cold test under 20 was 22½ cents with sales of 28-30 as high as 45 cents reported.

Lubricating Oils

Except for the 2-cent advance in bright stocks, the lubricating oil situation is unchanged. Both the domestic and export on bright stocks is more active and this condition is responsible for the advance. Some improvement was reported by two manufacturers in the higher viscosity neutral oils. Wax prices are slightly higher with more inquiries.

TO BUILD OIL STORAGE FACILITIES AT DUNKIRK

NEW YORK, Aug. 24.—The Standard Oil Co. of New York has purchased the wharf and adjoining properties of the Erie Railroad Co. located along the Erie lake shore at Dunkirk. The Standard will build storage and barge loading facilities to enable it to transport gasoline and other refined products by rail and by truck from here, receiving the products at this point by tanker at a material savings in transportation expense.

Late Fields

(Continued from Page 24)

from eight wells, with a total of 825 wells completed in the pool.

KANSAS

Umpire Lloyd R. Pickrell, of the Ritz-Canton area, announced that the 32 chat producing wells in the pool would be allowed to produce 50 bbls. a day, and that two Viola lime wells, Stearns, Streeter Co.'s No. 1 Blair, NW cor., Section 32-19-1w, and Phillips Petroleum Co.'s No. 2 Gratton, SE cor., Section 19-19-1w, would both be allowed to produce 50 bbls. a day. Under this plan the pool will have a daily production of approximately 2,200 bbls. a day compared to 20,000 bbls. it had been making. A total of 82 wells were completed in the pool to August 1. It is believed all the chat wells are making considerable water.

The Kansas Public Service Commission announced dates for the hearing on the shutdown orders in the two areas affected. The hearing on the threatened opening of the Schurr Pool, near Raymond, in Rice County, was set for September 9, at Topeka, and the general hearing on the proration of oil in all the pools except the small stripper wells, was set for September 14, at Wichita.

W. C. McBride, Inc.'s No. 2 Whitright, NW cor. SW, Section 30-19-1w, a new well in Ritz-Canton Field, pumped 1,206 bbls. of oil in 24 hours from the Viola lime.

Another test was announced, Harris & Haun's No. 1 Blair, NE cor. NW, Section 28-19-1w. It is located a half mile south of production in the Ritz-Canton Field.

J. H. Reid and others' No. 1 Keefer, in Lot 16, Block 2, Section 21-19-1w, Canton Townsite, was preparing to spud. It is the first operation on the townsite which is located on the extreme east edge of the Ritz-Canton Field. Jones and others' No. 1 Altman, on Block 1, Section 21-19-1w, is the second test on the Canton Townsite. The operators were moving in material to erect the rig.

The eastern part of the State is becoming active with new work getting under way in Chautauqua County. In the Jonesburg Field south of Sedan, the Sedan Gas Co. is starting another test. W. H. Sproul is also moving in for a test on the Schobe farm. E. Hoy and others are drilling a test 2 miles north of Hale. Denman Brothers have completed a dry hole south of Hale. G. H. Leighty and others are preparing to start a test northeast of Hewins. Williams & Anderson have resumed operations on the test southwest of Chautauqua.

The wildcat test, Dewey & Mitchell and others' No. 1 Greenawalt, C SW, Section 17-19-16w, Rush County, was given a 30-quart shot, which is believed to have turned a small showing of oil into a 400-bbl. well. The oil was found in the Silicious lime at 3,820-80 feet. It was plugged back to 3,867 feet after finding sulphur water. In a swabbing test the well made 100 bbls. of oil in 4 hours. It is located on a block of 2,000 acres. Other companies with acreage in the block are Derby Oil Co., The Texas Company, and Arkansas Fuel Oil Co. The operators believe the well has opened another producing area in the county.

Continental Oil Co.'s No. 1 Nagel, SE cor. NE NW, Section 19-27-2, in the north end of the Eastborough Pool, in Sedgwick County, a chat producer, is rigging up to drill deeper to the deep pay horizon. The well has been pumping 40 bbls. of oil and 350 bbls. of water a day. The company was prompted to drill deeper as the result of the Derby Oil Co. and Magnolia Petroleum Co.'s wells which found oil in the Viola lime. Derby Oil Co.'s well is making around 500 bbls. a day and the Magnolia Petroleum Co.'s well is making 922 bbls. flowing, and is being put on the pump.

CALIFORNIA CRUDE OIL PRICES

(Continued from Page 101)

UNION OIL CO. OF CALIFORNIA

Crude Oil Prices for Its Purchases at the Well for Crude Produced in Strict Accordance With the Production Allocations Made by the California Statewide Curtailment Committee Effective 7 a.m., June 20, 1931

(All gravities above these quoted take highest price for that field)

Gravity °A.P.I.		Signal Hill	Alamitos Heights, Seal Beach	Huntington Beach	Athens, Rosecrans, Dominguez	Torrance	Santa Fe Springs	Playa Del Rey*	E. Coyote, Richfield	Montebello	Santa Paula	Orcutt	Coalinga	Lost Hills	McKittrick, Kern River, Sunset-Midway, Elk Hills, Buena Vista Hills	Gravity °A.P.I.
11-13.9	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	$.50	11-13.9
14-14.9	.....	$.65	$.65	$.65	....	$.66	....	....	$.66	$.65	$.65	$.55	$.55	$.55	.55	14-14.9
15-15.9	.....	.65	.65	.65	....	.65	....	....	.65	.65	.65	.55	.55	.55	.55	15-15.9
16-16.9	.....	.65	.65	.65	....	.65	....	....	.65	.65	.65	.55	.55	.55	.55	16-16.9
17-17.9	.....	.65	.65	.65	....	.65	....	....	.65	.65	.65	.55	.55	.55	.55	17-17.9
18-18.9	.....	.65	.65	.65	....	.65	....	....	.65	.65	.65	.56	.55	.55	.55	18-18.9
19-19.9	.....	.65	.65	.65	....	.65	....	$.65	.65	.65	.65	.55	.55	.55	.55	19-19.9
20-20.9	.....	.65	.65	.65	....	.65	....	.65	.65	.65	.65	.56	.55	.55	.55	20-20.9
21-21.9	.....	.65	.65	.65	....	.65	....	.66	.66	.65	.65	.57	.55	.57	.55	21-21.9
22-22.9	.....	.65	.65	.65	....	.66	....	.67	.67	.65	.65	.59	.55	.59	.56	22-22.9
23-23.9	.....	.67	.67	.67	....	.67	....	.68	.68	.65	.65	.61	.55	.60	.58	23-23.9
24-24.9	.....	.69	.69	.69	$.69	.68	$.65	.69	.69	.65	.66	.63	.55	.62	.61	24-24.9
25-25.9	.....	.71	.71	.71	.71	.70	.65	.70	.70	.65	.68	.65	.57	.64	.64	25-25.9
26-26.9	.....	.73	.73	.72	.72	....	.65	....	.72	....	.70	.67	....	.66	.66	26-26.9
27-27.9	.....	.75	.75	.75	.75	....	.68	....	.74	....	.72	....	....	.67	.68	27-27.9
28-28.9	.....	.77	....	....	.77	....	.71	....	....	....	.74	....	....	.69	.71	28-28.9
29-29.9	.....	.79	....	....	.79	....	.73	....	....	....	.76	....	....	.71	.74	29-29.9
30-30.9	.....	.81	....	....	.81	....	.75	....	....	....	.78	....	....	.72	.76	30-30.9
31-31.9	.....	....	....	....	.83	....	.78	....	....	....	....	....	....	....	....	31-31.9
32-32.9	.....	....	....	....	.85	....	.80	....	....	....	....	....	....	....	....	32-32.9
33-33.9	.....	....	....	....	.87	....	.83	....	....	....	....	....	....	....	....	33-33.9
34-34.9	.....	....	....	....	.89	....	.85	....	....	....	....	....	....	....	....	34-34.9

*Subject to a gathering charge of 5 cents per barrel.

A.P.I. PRODUCTION GROUP TO MEET AT LUFKIN, TEX.

The regular fall meeting of the Southwestern district of the American Petroleum Institute, Division of Production, will be held in the Angelina Hotel, Lufkin, Tex., September 24 and 25.

As the program will be devoted to a presentation and discussion of problems and practices affecting drilling and production operations in the East Texas Field, including fire and accident prevention, it was decided to hold this meeting at Lufkin due to its proximity to the new field.

One day's session will be devoted to general discussion of proper and improper drilling and producing methods in East Texas, where almost every sort of practice is indulged in, and there has been an unusual number of accidents and fatalities, as well as costly fires. Especially prepared papers will be presented detailing these various facts along with recommendations describing safe and proper methods.

Fire and accident prevention will receive special attention. Complete description of the methods and equipment used in extinguishing some of the more recent fires and a progress report of the activities of the East Texas Fire Protection Committee will be presented.

Other papers will concern making connections to wells and pipe lines under pressure by electric welding process, combating paraffin in cold weather, etc.

CRUDE OIL PRICE CHANGES

(Continued from Page 102)

vanced the market price of Illinois, Princeton, Wooster and Western Kentucky 10 cents per barrel and Lima 5 cents per barrel. On the same day the Stoll Refining Co., which on August 19 had advanced crude in its lines 15 cents per barrel, increased this price on August 24 by 10 cents, making Hart County, Kentucky crude 75 cents. The Ashland Refining Co. on August 22 advanced Somerset, Kentucky, crude to 80 cents. The Pure Oil Co. advanced Midland, Mich., crude to 53 cents on August 24.

The Mid West Refining Co., Continental Oil Co. and the Ohio Oil Co. on August 24 advanced prices in the Rocky Mountain fields 5, 8 and 10 cents per barrel. The Continental Oil Co. also advanced prices in southeastern New Mexico.

The Imperial Refining Co. posted an advance in Oil Springs, Ontario and Petrolia, Ontario.

The only divisions not receiving a crude advance in the past week were the Appalachian division or Eastern fields, where crude advances were made on August 17, and California, where the last price changes were made June 19 and 20.

TANK WAGON CHANGES

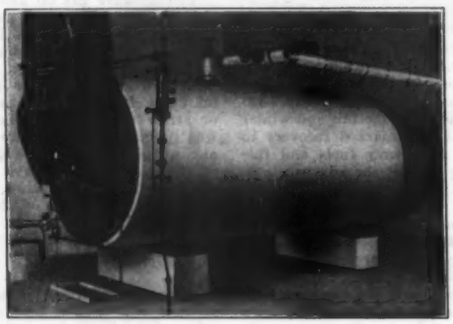
(Continued from Page 102)

tion prices in Memphis, Tenn., to 16.5 and 17.5 cents August 15. On the same date these prices were reduced to 16.5 cents each in Nashville, Tenn. On August 19 the tank wagon and station prices were reduced 1 cent in Nashville to 15.5 cents and on the same date reduced the station price in Chattanooga 1 cent.

Standard Oil Co. of Kentucky increased the gasoline tank wagon and station prices to 17 and 18 cents in Savannah, Ga., on August 19. On the same date these prices were advanced in Jacksonville, Fla., to 17 and 18 cents. Continental Oil Co. reduced the gasoline tank wagon and station prices in Butte, Mont., 2 cents August 13 to 17 and 20 cents.

Continental Oil Co. advanced the gasoline tank wagon and station prices 1 cent in Albuquerque, N. Mex., August 24.

Standard Oil Co. of Indiana advanced the tank wagon and station prices on the regular grade of gasoline in Detroit to 14.8 cents, Chicago, 14 cents, and in St. Louis, 12.9 cents, on August 25.



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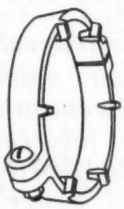

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The GREEN marker yarn on the outside of one strand of the dark brown rope identifies AMCO "ALL-WEATHER" Manila.

REPORT OF BUREAU OF MINES FOR THE MONTH OF JUNE, 1931

SUPPLY AND DEMAND OF ALL OILS

(Including wax, coke and asphalt in thousands of barrels of 42 U. S. gallons)

	June, 1931	May, 1931	June, 1930	Jan.-June, 1931	Jan. June, 1930
NEW SUPPLY:					
Domestic production:					
Crude petroleum	75,116	77,164	76,920	421,414	466,026
Daily average	2,504	2,489	2,564	2,328	2,575
Natural gasoline	3,521	3,814	4,269	22,978	26,452
Benzol	160	186	235	1,083	1,473
Total production	78,797	81,164	81,423	445,475	493,951
Daily average	2,627	2,618	2,714	2,461	2,729
Imports:					
Crude petroleum	3,978	4,512	5,767	25,509	31,130
Refined products	2,396	2,847	4,027	19,284	21,587
Total new supply, all oils	85,171	88,523	91,227	490,268	546,668
Daily average	2,839	2,856	3,041	2,709	3,020
Increase in stocks, all oils	*2,592	*81	*3,083	*13,450	8,163
DEMAND:					
Total demand	88,763	88,604	94,310	503,718	538,505
Daily average	2,959	2,858	3,144	2,783	2,975
Exports:					
Crude petroleum	2,544	2,268	2,508	11,853	12,094
Refined products	7,753	9,837	14,453	51,078	71,291
Domestic demand	78,466	76,499	77,349	440,787	455,120
Daily average	2,616	2,468	2,578	2,345	2,514
Excess of daily average domestic production over domestic demand	11	150	136	26	215
STOCKS (end of month):					
Crude petroleum:					
East of California	353,710	354,306	384,222	353,710	384,222
California†	139,058	140,816	146,321	139,058	146,321
Total crude	492,768	495,122	530,543	492,768	530,543
Natural gasoline at plants	860	996	928	860	928
Refined products	158,992	160,094	165,858	158,992	165,858
GRAND TOTAL STOCKS, ALL OILS	652,620	656,212	697,329	652,620	697,329
Days' supply	221	230	222	235	234
Bunker oil (included above in domestic demand)	4,053	34,286	4,041	23,215	25,297

*Decrease. †Includes residual fuel oils. ‡Revised.

COMPARATIVE ANALYSES

(Thousands of barrels of 42 U. S. gallons)

	June, 1931 Total	June, 1931 Daily av.	May, 1931 Total	May, 1931 Daily av.	Jan.-June, 1931	Jan.-June, 1930
CRUDE PETROLEUM:						
Runs to stills: Domestic	72,288	2,409	74,298	2,397	413,676	447,581
Foreign	3,949	132	4,223	136	24,659	30,076
Total	76,237	2,541	78,521	2,533	438,335	477,657
Imports	3,978	133	4,512	146	25,509	31,130
Exports	2,544	85	2,268	73	11,853	12,094
MOTOR FUEL:						
Production	37,024	1,234	39,019	1,259	211,926	223,317
Imports	964	32	1,050	34	7,033	8,158
Exports	3,265	109	4,992	161	23,899	34,808
Stocks*	44,926	...	47,948	...	44,296	50,225
Domestic demand	38,375	1,279	35,716	1,152	191,505	189,703
KEROSENE:						
Production	3,404	113	3,389	109	20,597	26,417
Imports	2	...	...	...	6	120
Exports	741	25	1,163	38	6,103	9,160
Stocks	6,521	...	5,960	...	6,521	8,352
Domestic demand	2,104	70	2,395	77	14,862	18,120
GAS OIL AND DISTILLATE FUELS:						
Production	7,302	243	7,622	246	45,697	39,560
Stocks	17,975	...	16,820	...	17,975	17,149
RESIDUAL FUEL OILS:						
Production	22,210	740	22,327	720	130,301	154,238
Stocks†	20,606	...	19,759	...	20,606	21,153
GAS OIL AND FUEL OIL:						
Production	29,512	984	29,949	966	175,998	193,798
Imports	1,412	47	1,788	58	12,167	13,097
Exports	2,633	88	2,675	86	15,335	19,824
Stocks	38,581	...	36,579	...	38,581	38,302
LUBRICANTS:						
Production	2,088	70	2,264	73	13,438	18,025
Imports	4	...	3	...	18	13
Exports	833	28	746	24	4,086	5,348
Stocks	9,763	...	10,119	...	9,763	9,742
Domestic demand	1,615	54	1,865	60	10,578	11,217
WAX (thousands of lbs.):						
Production	34,160	1,139	35,840	1,156	221,760	308,280
Imports	3,509	117	1,394	45	15,714	15,979
Exports	20,391	680	17,586	567	135,386	135,649
Stocks	200,836	...	205,803	...	200,836	249,748
Domestic demand	22,245	742	18,950	611	133,844	128,454
COKE (short tons):						
Production	179,600	5,987	178,400	5,755	1,006,600	929,700
Stocks	1,315,400	...	1,259,300	...	1,315,400	890,700
ASPHALT (short tons):						
Production	314,700	1,049	304,000	9,806	1,369,800	1,578,500
Stocks	393,300	....	379,800	....	393,300	312,000
ROAD OIL:						
Production	700	23	539	17	1,729	2,202
Stocks	477	....	508	...	477	540
MISCELLANEOUS:						
Production	1,115	37	1,100	35	5,604	3,099
Stocks	751	...	694	...	751	480

*Includes motor fuel blends held at natural gasoline plants and in gasoline pipe line systems. †East of California.

RECORD OF WELLS FOR IMPORTANT FLUSH FIELDS, JUNE, 1931*

	Completions: Oil	Gas	Dry	Total initial production (bbls.)	Ave. initial production (bbls.)	Drilling June 30
Texas	440	14	135	135,800	300	998
East Texas	349	...	21	113,500	300	549
Gulf Coast	27	3	19	12,200	500	61
West Texas	16	1	15	2,700	200	94
California	32	...	14	62,300	1,900	185
Kettleman Hills	7	...	...	47,400	6,800	12
Long Beach	1	...	2	500	500	15
Playa Del Rey	3	...	...	1,100	400	4
Oklahoma	49	24	31	176,900	3,600	279
Oklahoma County	24	1	...	170,200	7,100	86
Pottawatomie County / Seminole County	5	...	2	1,800	400	9
New Mexico	1	2	...	1,500	1,500	51
Lea County (Hobbs)	1	...	...	1,500	1,500	5
Other states	81	81	125	26,200	300	933
Total United States	603	121	305	402,700	1,500	2,446

*From The Oil and Gas Journal and California office of American Petroleum Institute.

(Continued on Next Page)

PRODUCTION OF CRUDE PETROLEUM BY STATES

(Thousands of barrels of 42 U. S. gallons)

	June, 1931 Total	June, 1931 Daily av.	May, 1931 Total	May, 1931 Daily av.	Jan.-June, 1931	Jan.-June, 1930
Arkansas	1,295	43	1,363	44	8,381	10,059
California:						
Kettleman Hills	1,751	58	1,189	39	5,972	2,484
Long Beach	2,399	80	2,666	86	16,027	18,406
Santa Fe Springs	1,964	65	2,233	72	12,768	25,923
Rest of State	9,527	318	10,361	334	60,909	71,590
Total California	15,641	521	16,449	531	95,676	118,403
Colorado	138	5	130	4	796	849
Illinois	457	15	382	13	2,374	3,004
Indiana:						
Southwestern	75	3	66	2	400	490
Northeastern	3	...	3	...	21	27
Total Indiana	78	3	69	2	421	517
Kansas	3,103	104	3,245	105	18,945	21,253
Kentucky	486	16	477	15	3,172	3,785
Louisiana:						
Gulf Coast	644	21	736	24	4,715	3,684
Rest of State	1,050	35	1,155	37	6,988	7,205
Total Louisiana	1,694	56	1,891	61	11,703	10,889
Michigan	210	7	225	7	1,491	2,078
Montana	251	8	257	8	1,512	1,496
New Mexico	1,290	43	1,400	45	7,340	2,699
New York	296	10	278	9	1,667	2,109
Ohio:						
Central and East	364	12	368	12	2,243	2,697
Northwestern	100	4	93	3	570	687
Total Ohio	464	16	461	15	2,813	3,384
Oklahoma:						
Oklahoma City	5,755	192	5,931	191	26,812	16,954
Seminole	4,379	146	4,702	152	27,612	46,023
Rest of State	7,576	252	7,794	251	46,019	54,001
Total Oklahoma	17,710	590	18,427	594	100,443	116,978
Pennsylvania	917	30	925	30	5,456	7,225
Tennessee	.....	.....	.....	.....	4	6
Texas:						
Gulf Coast	4,005	134	4,531	146	26,361	31,485
East Texas	10,657	355	9,554	308	31,399	.....
West Texas	6,481	216	6,701	216	42,159	58,525
Rest of State	8,302	277	8,699	281	49,268	59,503
Total Texas	29,445	982	29,485	951	149,187	149,513
West Virginia	380	13	373	12	2,230	2,763
Wyoming:						
Salt Creek	741	25	771	25	4,628	5,356
Rest of State	520	17	556	18	3,175	3,620
Total Wyoming	1,261	42	1,327	43	7,803	8,976
United States total	75,116	2,504	77,164	2,489	421,414	466,026

PRODUCTION OF CRUDE PETROLEUM BY FIELDS, WITH CLASSIFICATION BY GRAVITY

(Thousands of barrels of 42 U. S. gallons)

FIELD:	June, 1931 Total	June, 1931 Dy.av.	May, 1931 Total	May, 1931 Dy.av.	Jan.-June, 1931	Jan.-June, 1930
Appalachian:						
Pennsylvania grade	1,778	59	1,763	57	10,473	13,605
Other (inc. Kentucky)	665	22	658	21	4,299	4,980
Lima-N. E. Ind.—Mich.	313	11	321	10	2,082	2,792
Ill.-S. W. Ind.	532	18	448	15	2,774	3,534
Mid-Continent:						
N. La. and Ark.	2,345	78	2,518	81	15,369	17,264
West Texas- S. E. New Mex.	7,713	257	8,070	260	49,240	60,935
Other (Okla., Kans., N. Tex., etc.)	29,772	1,326	29,925	1,288	200,055	197,734
Gulf Coast:						
Grade A	1,440	48	1,452	47	10,002	16,668
Grade B	3,209	107	3,815	123	21,074	18,501
Rocky Mountain	1,708	57	1,745	56	10,370	11,610
California	15,641	521	16,449	531	95,676	118,403
Total	75,116	2,504	77,164	2,489	421,414	466,026
CLASSIFICATION BY GRAVITY (approx.):						
Light crude	68,979	2,299	70,632	2,278	381,561	411,911
Heavy crude	6,137	205	6,532	211	39,853	54,115

INDICATED DOMESTIC DEMAND FOR CRUDE PETROLEUM EAST OF CALIFORNIA

(Thousands of barrels of 42 U. S. gallons)

Domestic petroleum by fields of origin:	June, 1931 Total	June, 1931 Dy.av.	May, 1931 Total	May, 1931 Dy.av.	Jan.-June, 1931	Jan.-June, 1930
Appalachian:						
Pennsylvania grade	1,998	66	1,656	54	10,807	11,954
Other (inc. Kentucky)	772	26	690	22	4,294	4,928
Lima-N. E. Ind.-Mich.	455	15	435	14	2,042	2,413
Ill.-S. W. Ind.	854	28	306	10	3,131	3,917
Mid-Continent:						
N. La. and Ark.	2,792	93	2,824	91	17,958	17,609
West Texas- S. E. New Mex.	8,181	273	10,322	333	57,590	65,387
Other (Okla., Kans., N. Tex., etc.)	37,803	1,260	37,368	1,205	199,747	195,957
Gulf Coast:						
Grade A	2,269	76	1,682	54	13,098	17,771
Grade B	2,567	86	4,809	155	20,582	18,413
Rocky Mountain	2,434	81	2,731	88	11,575	11,809
California	.....	....	.....	....	.....	135
Total demand	60,125	2,004	61,813	2,026	340,824	350,293
Exports	1,858	62	1,543	50	7,815	7,490
Domestic demand	58,267	1,942	61,270	1,976	333,009	342,803
Foreign petroleum	3,924	131	4,673	151	24,764	31,750
Total domestic demand east of California	62,191	2,073	65,943	2,127	357,773	374,553

SHIPMENTS FROM CALIFORNIA TO EASTERN PORTS IN UNITED STATES*

(Thousands of barrels of 42 U. S. gallons)

	June, 1931	May, 1931	June, 1930	Jan.-June, 1931	Jan.-June, 1930
Gasoline	1,234	1,016	2,549	7,490	9,812
Natural gasoline	....	336	....	805	....
Kerosene	48	....	81	136	180
Gas oil	95	....	65	967	1,721
Diesel oil	....	....	64	....	208
Fuel oil	....	....	4	2	20
Lubricants	15	1	1	53	99
Asphalt	2	2	1	10	11
Total	1,394	1,355	2,765	9,453	12,051

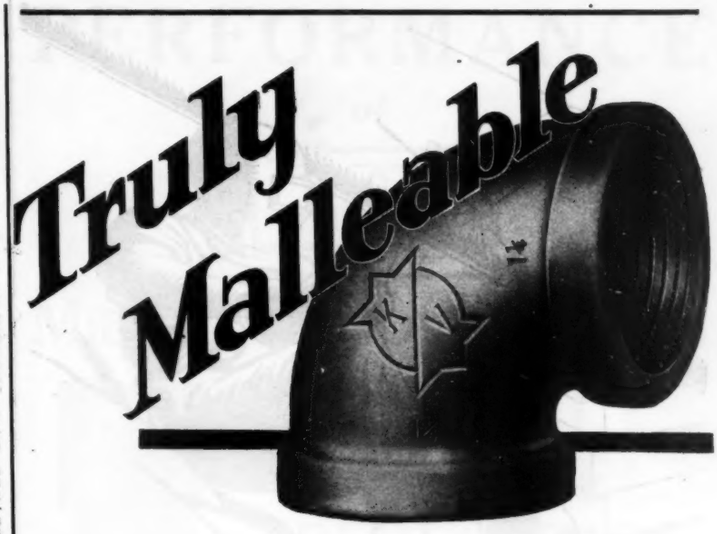
*Compiled by E. T. Knudson of the San Francisco office of the Bureau of Mines.

NUMBER OF WELLS COMPLETED IN THE UNITED STATES*

	June, 1931	May, 1931	June, 1930	Jan.-June, 1931	Jan.-June, 1930
Oil	603	498	1,197	2,940	6,700
Gas	121	178	276	1,052	1,273
Dry	305	355	602	2,273	3,392
Total	1,029	1,031	2,075	6,265	11,365

*From The Oil and Gas Journal and California office of American Petroleum Institute.

(Continued on Next Page)



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USE Kennedy Malleable Iron Fittings on a job, pull them up tight, and note how they stand the wrench strains without splitting, cracking, or other sign of weakness.

Kennedy Fittings are made truly malleable, through and through, by being annealed for over 200 hours—more than 8 days—in pyrometer-controlled ovens. Furthermore, each lot is carefully inspected to make sure that there are no flaws inside or outside, and the precision machine work assures clean, sharp, accurate threading and generous chamfer.

You are safe when you use Kennedy Malleable Iron Pipe Fittings—safe against losses in pipe fitting time, replacements and trouble jobs. Try them on your next order and you will soon see why specifying Kennedy helps to assure speedy and profitable piping jobs.

Kennedy Malleable Iron Pipe Fittings are so truly malleable that they may be crushed almost flat without crushing.

The Kennedy Valve Mfg. Co.
Elmira, N. Y.

Sales Offices and Warehouses in Principal Cities

Cut risk of poor welds to a minimum

So serious may be the consequences of poor welds in pipe line construction, that engineers and contractors are making every possible effort to eliminate their occurrence.

An ever increasing number of pipe line engineers and contractors are learning that the risk of poor welds is materially reduced through the use of Roebling Welding Wire.

We make this wire by a special method. For example, the steel is not produced on the usual large-tonnage basis. It is *custom-made* at our own plant in *small* open-hearth furnaces —permitting close control of the melt. This, in turn, makes possible the production of a steel free of non-metallic impurities and with exactly the properties desired.

Why not judge this welding wire yourself? First of all we know that you will find it to be absolutely unvarying in quality. Secondly we are confident that you will be delighted with the strong, tough welds that are made with it.

Ask our distributor—Frick-Reid Supply Corporation—to send you samples for testing. Roebling Welding Wire is made in gas and electric types, for general oil field use and pipe line construction.

JOHN A. ROEBLING'S SONS CO.
TRENTON, NEW JERSEY

Welding Wire Distributors for Oil Fields
FRICK-REID SUPPLY CORP.
Pittsburgh, Pa. Tulsa, Okla. Houston, Texas

ROEBLING WELDING WIRE

RUNS TO STILLS AND OUTPUT OF REFINERIES, JUNE, 1931

(Thousands of barrels of 42 U. S. gallons)

INPUT—	Crude oil: Domestic	Crude oil: Foreign	Crude oil: Total	Unfinished oils rerun	Natural gasoline	Total input
East Coast	10,659	3,652	14,311	691	64	15,066
Appalachian	2,932	.....	2,932	173	38	3,143
Ind., Ill., Ky., etc.	10,072	.....	10,072	180	158	10,410
Okla., Kans., Mo.	9,034	.....	9,034	173	439	9,646
Texas	18,567	111	18,678	708	870	20,256
Louisiana and Ark.	5,111	186	5,297	313	207	5,817
Rocky Mountain	1,734	.....	1,734	356	103	2,193
California	14,179	.....	14,179	312	*1,030	15,521
United States total	72,288	3,949	76,237	2,806	2,909	81,952
Texas Gulf Coast	12,854	111	12,965	618	591	14,174
Louisiana Gulf Coast	3,362	186	3,548	7	112	3,667

OUTPUT—	Gasoline	Kerosene	Gas oil and fuel oils: Gas oil and distillate fuels	Gas oil and fuel oils: Residual fuel oils	Gas oil and fuel oils: Total	Lubricants	Wax (thousands of lbs.)
East Coast	5,504	667	1,536	4,715	6,301	638	14,330
Appalachian	1,424	281	191	326	517	370	3,120
Ind., Ill., Ky., etc.	6,075	233	820	1,420	2,240	206	3,920
Okla., Kans., Mo.	5,100	622	862	1,701	2,563	227	1,960
Texas	9,440	834	1,580	6,058	7,638	380	2,240
Louisiana and Arkansas	2,130	336	441	1,595	2,036	46	2,240
Rocky Mountain	1,063	77	101	256	357	39	1,400
California	5,858	353	1,721	6,139	7,860	182	....
United States total	36,624	3,404	7,302	22,210	29,512	2,088	34,160
Texas Gulf Coast	6,595	626	1,347	3,887	5,234	361	3,240
Louisiana Gulf Coast	1,347	262	291	996	1,287	32	2,240

OUTPUT (Cont'd.)—	Coke (tons)	Asphalt (tons)	Other finished products: Road oil	Other finished products: Miscellaneous	Other finished products: Total	Unfinished products	Shortage
East Coast	11,200	177,600	50	31	81	210	530
Appalachian	3,300	9,100	58	27	85	220	150
Ind., Ill., Ky., etc.	65,500	32,400	168	458	626	355	116
Okla., Kans., Mo.	29,800	700	121	135	256	247	467
Texas	49,400	18,400	4	68	72	436	1,095
Louisiana and Arkansas	8,600	33,400	20	113	133	716	164
Rocky Mountain	11,600	700	135	32	167	386	36
California	200	26,400	144	251	395	156	886
United States total	179,800	314,700	700	1,115	1,815	2,736	3,014
Texas Gulf Coast	39,400	18,400	4	47	51	218	769
Louisiana Gulf Coast	8,400	23,800	.....	96	96	413	48

*Includes 107,000 bbls. run through pipe lines.

GASOLINE PRODUCTION BY THE VARIOUS METHODS, JUNE, 1931

(Thousands of barrels of 42 U. S. gallons)

	Straightrun: Total	Straightrun: %	Cracked: Total	Cracked: %	Nat. gasoline: Total	Nat. gasoline: %	Grand total
East Coast	2,409	44	3,031	55	64	1	5,504
Appalachian	794	56	592	41	38	3	1,424
Ind., Ill., Ky., etc.	3,134	51	2,783	46	158	3	6,075
Okla., Kans., Mo.	2,874	56	1,787	35	439	9	5,100
Texas	4,939	52	3,631	39	870	9	9,440
Louisiana and Arkansas	1,051	49	872	41	207	10	2,130
Rocky Mountain	490	46	470	44	103	10	1,063
California	3,763	64	1,095	19	1,030	17	5,888
Total	19,454	53	14,361	39	2,909	8	36,624
Texas Gulf Coast	3,030	47	2,924	44	591	9	6,595
Louisiana Gulf Coast	639	48	596	44	112	8	1,347

SHIPMENTS OF MOTOR FUEL BY PIPE LINES

(Thousands of barrels of 42 U. S. gallons)

	June, 1931	May, 1931	Jan.-June, 1931
Motor fuel turned into lines	1,142	1,127	3,671
Motor fuel delivered from lines	713	862	2,636
Stocks in lines and working tanks end of month	1,235	800	1,235

STOCKS HELD BY REFINING COMPANIES, JUNE 30, 1931*

(Thousands of barrels of 42 U. S. gallons)

	Gasoline	Kerosene	Gas oil and fuel oil: Gas oil and distillate fuels	Gas oil and fuel oil: Residual fuel oils	Gas oil and fuel oil: Total
East Coast	7,000	1,309	4,410	4,947	9,357
Appalachian	1,634	359	779	522	1,302
Ind., Ill., Ky., etc.	6,080	576	1,509	2,131	3,640
Okla., Kans., Mo.	3,481	479	2,812	2,967	5,779
Texas	7,447	1,162	3,240	7,533	10,773
Louisiana and Arkansas	1,531	582	647	1,934	2,581
Rocky Mountain	1,946	264	262	571	833
California	†13,924	1,790	4,316	(‡)	4,316
Total	43,053	6,521	17,975	20,606	38,581
Texas Gulf Coast	5,612	1,051	2,634	4,529	7,163
Louisiana Gulf Coast	1,400	531	419	1,325	1,744

	Lubricants	Wax (thousands of lbs.): Crude scale	Wax (thousands of lbs.): Refined	Wax (thousands of lbs.): Total	Coke (tons)
East Coast	2,998	34,913	18,347	53,260	41,600
Appalachian	1,121	24,380	2,550	26,930	11,200
Ind. Ill., Ky., etc.	1,152	20,886	1,582	22,468	139,500
Okla., Kans., Mo.	711	1,799	2,153	3,952	104,500
Texas	2,390	1,073	12,041	13,114	689,000
Louisiana and Arkansas	172	53,692	2,063	55,755	95,000
Rocky Mountain	253	23,839	1,518	25,357	126,700
California	1,066	.....	.....	.....	107,900
Total	9,763	160,582	40,254	200,836	1,315,400
Texas Gulf Coast	2,191	1,073	12,032	13,105	689,000
Louisiana Gulf Coast	151	53,692	2,063	55,755	94,700

	Asphalt (tons)	Other finished products: Road oil	Other finished products: Miscellaneous	Other finished products: Total	Unfinished oils: Natural gasoline	Unfinished oils: Other	Unfinished oils: Total
East Coast	160,500	25	63	88	270	9,360	9,630
Appalachian	22,300	25	51	86	11	1,557	1,568
Ind., Ill., Ky., etc.	75,600	77	301	378	51	5,224	5,275
Okla., Kans., Mo.	4,400	77	27	104	17	3,209	3,226
Texas	9,100	8	10	18	221	15,165	15,386
La. and Ark.	65,500	7	12	19	12	2,652	2,664
Rocky Mountain	3,600	166	36	202	....	1,799	1,799
California	52,300	82	251	333	1,634	§7,832	9,466
Total	393,300	477	751	1,228	2,216	46,798	49,014
Texas Gulf Coast	9,100	8	4	12	213	13,666	13,879
La. Gulf Coast	38,200	....	6	6	7	2,124	2,131

*Stocks east of California represent inventories held by refining companies at or near refineries; California stocks represent inventories held by refining companies on the Pacific Coast of the United States at refineries, at or in transit to water terminals and bulk distributing stations. †Includes 309,000 bbls. engine distillate. ‡Included with heavy crude. §Includes 2,454,000 bbls. tops.

(Continued on Next Page)

PRODUCTION OF MOTOR FUEL
(Thousands of barrels of 42 U. S. gallons)

	June, 1931		May, 1931*		Jan.-June,	Jan.-June,
	Total	Daily av.	Total	Daily av.	1931	1930
Straightrun gasoline	19,454	649	19,778	638	106,536	117,502
Cracked gasoline	14,261	475	15,544	501	85,732	80,111
Natural gasoline:						
Blended at refineries	2,802	93	3,011	97	17,797	21,344
Blended at plants†	15	1	14	1	82	145
Run through pipe lines‡	107	4	86	3	496	1,142
Jobbers, exports, etc.	225	7	400	13	1,900	1,300
Benzol produced§	160	5	186	6	1,083	1,473
TOTAL MOTOR FUEL	37,024	1,234	39,019	1,259	211,926	223,317

*Revised. †East of California. ‡To refineries in California. §Estimated.

IMPORTS AND EXPORTS OF CRUDE PETROLEUM AND MAJOR REFINED PRODUCTS*
(Thousands of barrels of 42 U. S. gallons)

	June, 1931		May, 1931		Jan.-June,	Jan.-June,
CRUDE PETROLEUM:	Total	Daily av.	Total	Daily av.	1931	1930
Imports	3,978	133	4,512	146	25,509	21,130
From Mexico	1,300	43	1,086	35	4,166	3,979
From Venezuela	1,943	65	2,276	74	13,543	18,668
From Colombia	611	21	1,088	35	6,891	7,164
From other countries	124	4	62	2	904	1,319
Exports:						
Domestic crude oil	2,544	85	2,268	73	11,853	12,094
To Canada	1,901	63	1,833	59	9,157	9,415
To other countries	643	22	435	14	2,696	2,678
Shipments	.....	.....	.....	.....	.....	1
Foreign crude oil	.....	.....	.....	.....	.....	.....
REFINED PRODUCTS:						
Gasoline:						
Imports	964	32	1,050	34	7,033	8,158
Exports†	3,265	109	4,992	161	23,899	34,808
To United Kingdom	1,197	40	1,608	52	7,797	10,609
To France	441	15	413	13	2,874	5,000
To Canada	223	7	356	11	1,446	1,816
To other countries	1,306	44	2,430	79	11,056	16,761
Shipments	93	3	185	6	726	622
Kerosene:						
Exports	741	25	1,163	38	6,103	9,160
To China	189	6	110	3	825	1,271
To United Kingdom	138	5	115	4	1,363	1,347
To other countries	393	13	920	30	3,830	6,375
Shipments	21	1	18	1	85	167
Gas oil and fuel oil:						
Imports	1,412	47	1,788	58	12,167	13,097
Exports	2,633	88	2,675	86	15,335	19,824
To Chile	207	7	307	10	1,734	2,353
To Panama	181	6	305	10	1,526	1,457
To other countries	2,073	69	1,675	54	10,498	13,827
Shipments	172	6	388	12	1,577	2,187
Lubricants:						
Exports	833	28	746	24	4,086	5,348
To United Kingdom	179	6	160	5	826	1,096
To France	103	4	103	3	672	779
To other countries	543	18	474	16	2,547	3,426
Shipments	8	.....	9	.....	41	47
Wax (thousands of lbs.):						
Imports	3,509	117	1,394	45	15,714	15,979
Exports	20,391	680	17,586	567	135,386	135,649
To United Kingdom	3,641	121	4,409	142	29,812	32,944
To Italy	1,272	43	2,469	80	24,607	18,851
To other countries	15,476	516	10,706	345	80,952	83,841
Shipments	2	.....	2	.....	15	13

*From Bureau of Foreign and Domestic Commerce. †Includes benzol—74,000 bbls. in June.

STOCKS OF CRUDE PETROLEUM
(Thousands of barrels of 42 U. S. gallons)

	June 30, 1931	May 31, 1931	June 30, 1930
EAST OF CALIFORNIA:			
At refineries by location:			
East Coast: Domestic	10,679	10,082	9,599
Foreign	3,811	3,601	4,349
Appalachian	2,296	2,308	3,078
Indiana, Illinois, Kentucky, Michigan, etc.	2,763	2,428	3,181
Oklahoma, Kansas and Missouri	5,613	5,546	5,653
Texas: Inland	1,611	1,623	2,193
Gulf Coast: Domestic	6,574	7,005	9,898
Foreign	195	325	231
Arkansas and Inland Louisiana	738	627	1,059
Louisiana Gulf Coast: Domestic	4,391	5,719	5,012
Foreign	592	613	895
Rocky Mountain	1,971	1,937	1,634
Total	41,734	41,819	46,772
At refineries by origin:			
Pennsylvania grade	2,153	2,153	3,881
Other Appalachian (inc. Kentucky)	745	818	809
Lima-N. E. Indiana-Michigan	194	179	100
Illinois-S. W. Indiana	124	139	131
N. Louisiana and Arkansas	2,914	3,336	4,765
West Texas and S. E. New Mexico	3,569	3,821	4,854
Oklahoma, Kansas, N. Texas, etc.	18,475	17,881	18,615
Gulf Coast: Grade A	2,334	2,717	4,314
Grade B	4,599	4,232	3,181
Rocky Mountain	2,019	1,994	1,631
California	5	5	26
Foreign	4,598	4,544	5,465
Total	41,734	41,819	46,772
Pipe line and tank farm:			
Pennsylvania grade	5,464	5,689	5,938
Other Appalachian (inc. Kentucky)	956	990	1,036
Lima-N. E. Indiana-Michigan	1,322	1,477	1,985
Illinois-S. W. Indiana	9,856	10,168	10,124
N. Louisiana and Arkansas	18,971	15,996	21,728
West Texas and S. E. New Mexico	38,731	38,957	48,786
Oklahoma, Kansas, N. Texas, etc.	191,110	189,647	198,860
Gulf Coast: Grade A	4,934	5,430	7,756
Grade B	10,866	10,593	11,480
Rocky Mountain	23,616	24,340	24,257
Total	305,876	306,237	331,050
Total refinery, pipe line and tank farm	347,610	342,106	377,822
Producers'	6,100	6,200	6,400
Total crude east of California	353,710	354,306	384,222
CALIFORNIA: Light	46,043	49,805	41,045
Heavy (including fuel)	99,015	100,011	105,276
Total crude (including fuel oil in California)	492,768	496,122	530,543

CENTRAL WEST FIELDS

(Continued from Page 48)

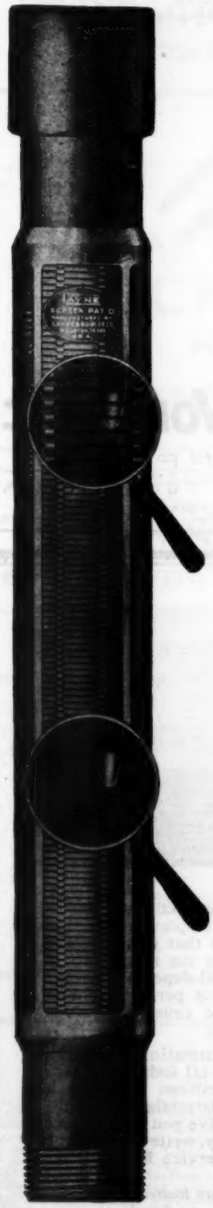
the Straight farm. A showing of gas was found in the Seger well at 113 feet.

Walter McLaren is reported drilling on the Wright farm, SE SE, Section 10, Volma Township, Cass County, along the Michigan-Indiana state line, almost due north of Elkhart.

CENTRAL WEST

Little has been accomplished by the drill in any division of the Central West Field, the Central Ohio area attracting the most attention, due to the finding of gas, and occasionally a fair oil producer,

PERFORMANCE
of
THE LAYNE
MILLED GROOVE SCREEN



CLOSELY PARALLELS PERFECTION

Have you ever tried charting the performance of a screen over a period of months or years? Those who have, obtained information that was amazing and upsetting to many firm beliefs of screen service.

Many wells equipped with the Layne Milled Groove Screen were charted. With but very few exceptions, the service line was parallel with and close to "Perfect". And our patented, Milled Groove Keystone Wire Wrapping again demonstrated its superiority.

Records show that a large increase of production is not infrequent with the Layne Milled Groove Screen. The prevention of Sand Cutting and mud clogging are other features of this screen that give practically perfect performance.

Straighten out the Screen performance line: Install Layne Milled Groove Screen.

The Layne & Bowler Co.
HOUSTON, TEXAS

The Layne New York Co.
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Los Angeles, Calif.

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B PRODUCTS for pumping wells
The KEY to LOWER LIFTING COSTS
CORRECTLY DESIGNED ECONOMICALLY PRODUCED
REASONABLY PRICED

Midget Liner Barrels for Small Wells and

especially when pumping action is interfered with by Vacuum and Gas.

The Midget Liner is inserted in old standard working barrel.

Perforated Top Crown is tapered to fit the counter-bored upper end of Working Barrel Tube. Fluid is packed off and Liner held in place by Two-Cup Lower Valve. Low in price—easily repaired and will save tubing jobs. Ask your supply store for further particulars or write direct.

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Speeds storage tank cleaning

WHEN tanks must be repaired, speed up the work by doing the preliminary cleaning the easy, safe Oakite way. Even the largest tanks can be prepared for welding, other repair, or for conversion to other oil storage . . . in quick time.

For instance, one California concern found it necessary to repair the floor plates in one of its 118,000 barrel tanks. In less than three days a crew of six men, using Oakite materials and methods had completely removed the oil so that the tank was cleaned to the metal. Not a trace of oil deposit remained to hinder a perfect welding job, or to cause dangerous gas fumes.

For information on the countless oil industry cleaning operations on which Oakite materials and methods can save you time, effort and money, write to have our nearest Service Man call.

Oakite Service Men, cleaning specialists, are located in the leading industrial centers of the U. S. and Canada.

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OAKITE PRODUCTS, INC., 44C Thames Street, NEW YORK, N. Y.

OAKITE
Industrial Cleaning Materials and Methods

but the hunt for gas is far reaching. The gas wells do not show the volume that the early wells of the field produced, when wells well up in the millions of feet, and in those days a well showing much less than 1,000,000 feet were not considered, while at this time a well as small as 250,000 feet is considered a fairly good one, and many of them are much smaller in volume.

In the old Lima Field of northwestern Ohio, but one completion was reported, when unknown parties drilled in and shot No. 1 on the John Brauss farm, in Tymochtee Township, Wyandot County, which was estimated around 750,000 feet initially. In the same county, Jones, Greege and others are drilling on the Fleschsenhar farm, Section 22, same township, and McPharon and others are drilling No. 1 Mrs. M. A. Walten farm, Section 16, same township.

Adrian Tester is reported working on the Charles Miller farm, Section 3, Mississinewa Township, Darke County. In Shelby County, W. A. Rucken is reported drilling No. 3 P. Gaffena farm, Section 25, Cynthian Township. Kurtz Gas Co. is nearing sand on the William F. Kurtz farm, Section 20, Jackson Township, Hardin County.

CENTRAL OHIO

The Central Ohio Field has taken a spurt in development work, there being 10 new completions reported, with 2 producers with an initial of 25 bbls., 2 dry holes and 6 gas wells, while there have been 14 new locations staked and 15 wells started spudding, a total of 29 in new work, indicating that more activity will be shown in the gas-producing areas during the fall months than for the summer season.

In Ashland County, Orange Township, the Ohio Fuel Gas Co.'s No. 2-5504 Juliette Barnhill farm, Section 12, failed to find any pay sand and is a dry hole. Commonwealth Gas Corp. made a location on the D. A. Phillips farm, Section 15, Milton Township.

In Lorain County, McMillan and others' No. 1 William M. Klooz farm, Lot 90, Columbia Township, is an average gas well from 2,709-43 feet.

In Medina County, Chatham Township, Edson and others' No. 16 George W. Packard farm, Lot 4, showed an initial of 20 bbls. from 340-88 feet. Commonwealth Gas Corp. found a duster on the C. Fenstemaker farm, Section 18, Homer Township, at 2,855 feet. Ramage & Willis are drilling a second test on the W. Barton farm, Lot 48, Litchfield Township.

In Wayne County, Harmon & George staked a location for No. 3 Thomas Arnold farm, Section 11, Chester Township.

In Holmes County, the Lydic Oil & Gas Co. is drilling No. 2 F. C. Close farm, Lot 23, Monroe Township.

In Conneaut Township, Ashtabula County, Schaeffer Brothers have a light gas well on the Elizabeth Laymen farm, Lot 61. Ross Riggs and others are drilling on the E. D. Frayer farm, in Jefferson Township.

Summitt County

In Summitt County, White & Bacon have a rig on the Kinfield & Thornton farm, Lot 47, Copley Township.

In Licking County, the Wehrle Gas Co. is drilling on the Darwin Fidler farm. Lot 26, Bennington Township; also drilling on the Hartman & Laughman farm, Lot 17, Hopewell Township.

In Muskingum County, Washington Township, the Ohio Fuel Gas Co.'s No. 1-5514 Martha Myers farm, in the Fourth quarter, of the township, is showing for 5 bbls., from 3,901-32 feet. The Atha Co. is drilling a second test on the Stark Land Co.'s property, Section 10, same township. Hopewell Gas Co. is drilling a second test on the Phillip Morningstar farm, Section 8, Brush Creek Township, same county, and the Pure Oil Co. has a rig on the Walter E. Helriggle farm, Section 9, same township. W. H. Atha's No. 4 on the Atha farm, Section 5, Falls Township, is an average gas well from 3,680-3,762 feet.

In Stark County, Jackson Township, the most active part of the Central Ohio Field, Medford Oil & Gas Co. has a fair gas well on the C. Price farm, Section 26, at from 4,425-50 feet. Ohio Fuel Gas Co. has a nice gas well in No. 1-5510 George L. Stockert farm, Section 17, and F. A. Brendall and others have a nice gas producer in No. 3 on the Lake Cable Co.'s land, Section 14, same township, in the Red Clinton formation from 4,363-4,402 feet. Same firm made three new locations in the township, in No. 1 J. H. Carnes, Section 16; No. 2 William A. Haymaker, Section 23; and No. 2 J. C. Steiner, Section 15. East Ohio Gas Co. made a location for No. 1 Mary Hinkel farm, Section 12, and is also drilling No. 2 H. B. Fawcett farm, Section 13, Jackson Township.

In Knox County, H. E. Perkins has a rig on the Warner Farmer farm, Section 23, Union Township, and Hulse & Kundtz are shut down at their No. 2 J. H. Colopy farm, same section and township. Whitehill Oil Co. has a rig on the son Township, same county.

In Guernsey County, Cambridge Township, W. C. Urban and others are drilling on the Charles D. Johnson farm, Section 3.

In Lorain County, Columbia Township, Dillon & McFrederick are drilling from the Berea sand to the Clinton lime is their No. 1 William R. Squires farm. Lot 88.

Bryan and others have a light showing of gas in the Berea sand from 725-52 feet in No. 4 Clarence Alexander farm. Section 23, Plain Township, Wayne County, but are undecided whether to go for a deeper pay formation.

Hopewell Gas Co. reports a nice gas well on the Sweeney-Koehler farm, Section 15, Reading Township, Perry County, in the Clinton lime from 2,969-99 feet.

Standard Natural Gas Co. is running a string of 590 feet of casing on the T. L. Young farm, Section 7, York Township, Athens County.

Nelsonville Gas Co. is delayed by a fishing job at 3,288 feet on the Eileen Stratton farm, Section 5, York Township, Athens County.

INDIANA

Notwithstanding the seasonal dullness and low oil markets activities continue in Perry County, and operators are enlarging their operations in the belief hard times will not last always. Two new wells have lately been brought in near Bristow production and three rigs are drilling on near-by leases, one on Deer Creek north of Cannellton and another near Route 37 on the Ed Cassidy farm which has reached 1,400 feet on its way to the Corniferous sand.

A number of new wells have been contracted for and in addition to the rigs now running there will be a continuation of drilling during the summer season. Among the new operators are Lane and associates of Portland, Me., who are drilling a deep test at Tobinsport near an old gas field at Cloverport, Ky., and are also drilling on the Lanman farm, 1 mile south of Bristow. These wells are in charge of Roy Beard of Owensboro, Ky., who has been connected with producers in Allen, Daviess and Hancock Counties in Kentucky. Hughes & Rife of Indianapolis are preparing to drill on the Faulkenburg farm on Highway 37, in Oil Township, Perry County. F. H. Waters and others of Bloomington, Ind., are organizing a syndicate to drill on the Lasher farm, Section 7, north of the Bristow production, while Lambert and others have contracted to drill a well on the Doogs lease, a mile northeast of the Aders farm on which are three good wells belonging to Conyers and associates. The Santa Fe Oil Co. of Evansville is drilling on the 15-acre Lagrange tract adjoining the Aders production.

Indiana Oil and Gas News

Compiled by Paul F. Simpson, state gas supervisor, Department of Conservation, Division of Geology, Indianapolis, Ind., by counties:

Adams County—M. T. Atwood abandoned Nos. 3 and 4 N. E. Logan, Section 22, Blue Creek Township. Ohio Oil Co. abandoned Nos. 1, 2 and 4 D. Dudgeon and No. 1 John H. Sipe, in Section 27, same township. Paul Schulty Oil &

Gas Co. abandoned seven wells on the Paul Schulte farm, in Section 17.

Crawford County—A test is planned by C. P. Erni and others on the Arthur Beasley farm in Sterling Township. Additional drilling may also be done by the Louisville Cement Co. near Milltown.

Daviess County—Bert White is drilling No. 1 David Arms, in the NW, Section 23, Harrison Township. Ben D. Ruble is drilling No. 1 Bernard Gilloogy, NW, Section 34, same township. In the SE, Section 24, Harrison Township, Harry Hanson is drilling No. 1 Oliver Smith.

Dearborn County—Dearborn Development Syndicate is drilling the Christ Schumaker, in Section 27, Kelso Township.

Gibson County—A 7-bbl. well was reported completed by the Wabash Public Service Corp. on the Ralph Onyett farm, NE, Section 22, Columbia Township.

Green County—Old Dominion Corp. was reported to have found a gas well at a depth of over 2,000 feet on the Mager and Fisher farm in Section 4, Washington Township. Same company is drilling No. 1 Walter Suphine, in Section 9.

Hendricks County — French Development Co. is reported to have taken leases near Clayton, although no drilling is contemplated for the near future.

Henry County — Bert Kinnaman has started a gas well on the Henry Foster farm at Spiceland.

Knox County—Gardner Petroleum Co. completed No. 2 Blann estate, SW, Section 15, Busseron Township; 2,300,000 feet of gas was reported. The second well on the Lance Hall farm in the NW, Section 16, same township, drilled by Lloyd and others, is down over 500 feet. In the SW, Section 25, the Knox Engineering Corp. is drilling at 500 feet in No. 1 C. G. Snapp.

Laporte County — Hauck and others are drilling No. 1 John Siffles, in Section 4, Lincoln Township.

Perry County — Moorehead and Blank are drilling No. 1 James A. Cassidy, in Section 15, Leopold Township. Roger E. Williams is drilling No. 1 Louis Lagrange, in the SW, Section 21, Oil Township.

Pike County—Ohio Oil Co. abandoned No. 5 A. Willis, in the NE, Section 6, Madison Township. Harry N. Bell completed a 1,500,000-foot gas well at 1,156 feet, on the R. M. Craig farm in the NE, Section 19, Washington Township. A second well has been started on the same lease. Cato Gas & Oil Corp. expects to start the third well on the Everette Crow lease, Section 25, Patoka Township. Wiser Oil Co. completed No. 1 Charles C. Doidge, in the SW, Section 24, Wash-J. and P. Allen farm, Section 3, Jackington Township, a dry hole at 1,190 feet. In the NW, Section 25, Patoka Township, the Eureka Gas & Oil Corp. has started No. 1 Sally Harmon. Bement Oil Co. completed a 500,000-foot gas well in No. 6 Claude Loveless, in Location 121, Clay Township. No. 1 Preston heirs, drilled in the SE, Section 30, Washington Township, by Berne Bruden, was dry and abandoned at 1,165 feet.

St. Joseph County—Browning, Stamp and others have started a well on the Harry Sonen farm, 6 miles northwest of Elkhart, in Penn Township. It is down deeper than 800 feet.

Sullivan County—A fourth well on the C. L. Davis lease, in the SE, Section 14, Turman Township, has been started by C. W. Scott. No. 3 Catherine Piety, drilled by H. Huntsman and others, in Section 7, Turman Township, was shut down because of a water shortage. Wyman and Brown completed a dry hole at 700 feet in No. 1 G. C. Shields, in the NW, Section 5, Hamilton Township. A deep Niagara wildcat is contemplated for the block of leases surrounding Merom.

Vanderburg County—An oil well was completed by the Vanderburg Oil Corp., as No. 5 George Hornby, in Section 32, Center Township. No. 1 William Riggs, drilled by the Peoples Petroleum Co., in NE, Section 18, Scott Township, was dry and plugged at 1,075 feet.

Vigo County—Ohio Oil Co.'s No. 1 O. H. Wier, NE, Section 32, Prairie Creek Township, was a dry hole at 2,285 feet.

ILLINOIS

Only one completion was reported from the Illinois fields, W. C. McBride, Inc.'s test, 200 feet from the north line and 600 feet from the west line of the A. E. Duncan farm, NE, Section 4, Montgomery Township, Crawford County, with an initial production of 20 bbls. from a depth of 945 feet. Most of the wells under way in Illinois are shut down, or idle.

Ohio Oil Co. abandoned No. 14 W. E. Finley farm, NW SW, Section 17, Bridgeport Township, Lawrence County.

W. O. Whaley pulled out and abandoned No. 1 on the Luther Smith, SE, Section 21, Sugar Loaf Township, St. Clair County, in the Dupo Field.

At last report the test of the Phillips Petroleum Co. on the W. R. Moss farm, Section 24, Elk Prairie Township, Jefferson County, was at 1,300 feet. The test of the Duncan Machine & Foundry Co., on the H. Woolridge, Section 23, Dorchester Township, Macoupin County, was reported down to 1,840 feet. In Marion County, the Bryan Lee Petroleum Co.'s test on the William Langewich farm, Section 4, Centralia Township, was down to 1,617 feet.

KENTUCKY

Suspension of development work in the Kentucky fields continues, there being very few wells being brought in in any part of the State. In the eastern division only one well was reported, Cox & Gabbard's No. 6 James Evans farm, District 17, Estill County, which produced an initial of 8 bbls.

In the Niagara Pool, in Henderson County, the Mecca Oil Co.'s No. 2 Sam King farm, is reported at 25 bbls., while the Imperial Oil & Products Co.'s No. 1 Doctor Clay farm, same field, was dry in the Jackson sand.

Frank Cox and others drilled a dry hole on the Gretcher farm, in the Habit Pool, of Daviess County, at 1,188 feet. Ellis & Ashley's No. 3 Lena Mayfield farm, in the Jones Pool southwest of Whitesville, same county, showed an initial of 70 bbls., at 834 feet.

B. B. & W. Oil Co. found a dry hole on the C. I. Coleman farm, in the Deanfield Pool of Ohio County at 628 feet.

Seaboard Oil & Gas Co. reported a depth of 780 feet on the Neize farm, in Hopkins County.

G. M. C. Oil & Gas Co. is drilling on the Dallas Schwimmer farm, near Carrollton, in Carroll County, between Louisville and Cincinnati, along the Ohio River.

MAN WHO STARTED IT SUMS UP EAST TEXAS

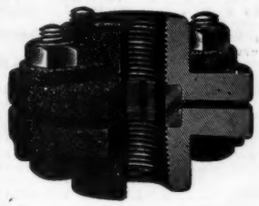
DALLAS, Tex., Aug. 24.—While the military arm of the State of Texas was exerting its first day of pressure on the oil fields of East Texas and the eyes of the petroleum industry were focused on the martial law experiment, C. M. (Dad) Joiner, the man who started it all by untapping the first of the millions of barrels there, spent his day Monday in a Dallas County courtroom.

"Sure, I'd rather be down there in the fields, seeing what just all this means," said the quiet-voiced, rather resigned oil operator. "Instead, I am kept here as a witness in this lawsuit while a bunch of lawyers wrangle over the proceeds from that oil discovery. I'd a heap rather be drilling than litigating, any day."

"I never got a cent out of that discovery well and never expect to," said Mr. Joiner as the attorneys disputed over a quarter of a million dollars' worth of land originally blocked up by Mr. Joiner and made valuable by his discovery well less than a year ago. "I'm here just as a witness.

"I believe this martial law will help out in East Texas. I guess it will ruin a bunch of wells to shut them off completely, but at that it will raise the price of oil and without a higher price the oil flowing was practically worthless. I only hope they don't keep us from finishing the drilling now under way."

DART UNIONS AND FLANGES



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LEGAL

Notice of sale of Oil and Gas Lease. Department of the Interior, United States Land Office, Salt Lake City, Utah, Aug. 14, 1931. Notice is given that oil and gas lease on the following described lands in the Virgin oil field, Washington County, Utah, is offered for sale under Section 17 of the act of February 25, 1920 (41 Stat. 437), at the royalty rates and in accordance with the drilling requirements fixed in the standard lease form, copy of which may be procured from the Commissioner of the General Land Office: T. 41 S., R. 12 W., Sec. 14, S½ NE¼, N½ NW¼, SE¼ NW¼, 200 acres. The sale will be held at this office at 10:00 a.m. on September 21, 1931. The successful bidder must deposit on the date of the sale with the Register of the Salt Lake City Land Office, certified check on a solvent bank, or cash, for one-fifth of the amount bid by him, and file the showing of qualifications to receive a lease required by Sec. 15 of the oil and gas regulations. Bidders are warned against violation of the provisions of Sec. 59, U. S. Criminal Code, approved March 4, 1909, prohibiting any unlawful combination or intimidation of bidders. The right is reserved to reject any and all bids in the discretion of the Secretary of the Interior. Ell F. Taylor, Register.

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TEXAS OIL MAPS

County and District
Catalog on Application

HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for June Runs

	Month (bbls.)	Dy. av. (bbls.)
Prairie P. L. Co.*	747,000	24,900
Gulf P. L. Co.	1,748,421	58,281
Texas P. L. Co.	772,241	25,741
Empire P. L. Co.	2,554,219	85,141
Magnolia P. L. Co.	1,449,089	48,303
Cosden P. L. Co.	616,667	20,555
Stanolind P. L. Co.	3,135,000	104,500
Oklahoma P. L. Co.	1,944,819	64,827
Other lines	7,038,000	234,600
Total June	20,005,456	666,848
Total May	20,731,690	668,764
Difference	726,234	1,916

Shipments

Prairie P. L.	2,147,395	71,580
Gulf P. L. Co.	1,536,830	51,228
Texas P. L. Co.	1,228,277	40,942
Empire P. L. Co.	2,901,757	96,725
Magnolia P. L. Co.	1,509,866	50,329
Cosden P. L. Co.	630,653	21,023
Stanolind P. L. Co.	3,466,680	115,556
Oklahoma P. L. Co.	2,345,085	78,169
Other lines	6,660,000	222,000
Total June	22,426,572	747,552
Total May	23,179,595	747,728
Difference	753,023	176

Stocks

Prairie O. & G. Co.	37,680,000
Gypsy Oil Co. and Gulf P. L. Co.	9,130,700
The Texas Company	3,228,595
Empire P. L. Co.	4,974,188
Magnolia Petroleum Co.	6,238,739
Mid-Continent Petroleum Corp.	3,739,851
Stanolind Crude Oil Pur. Co.	18,904,000
Oklahoma P. L. Co.	2,318,945
Carter Oil Co.	8,603,483
Other lines	19,822,000
Total June	114,630,501
Total May	114,870,509
Difference	240,008

*Estimated.

EASTERN PIPE LINE REPORT FOR MONTH OF JULY

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Illinois, Indiana and Michigan for June and July.

	June,'31	July,'31
Nat. Transit	142,665.44	133,230.85
S. W. Pa. P. L.	74,374.26	71,451.01
Eureka P. L.	302,226.17	289,307.41
Buckeye P. L. (Macksburg)	293,480.77	243,334.42
Buckeye P. L. (Cleveland)	11,410.57	11,493.40
Buckeye P. L. (Lima, etc.)	87,182.23	86,516.97
Indiana P. L.	3,000.67	2,402.03
Cumberland P. L.	156,303.08	164,965.59
N. Y. Transit	28,964.08	25,816.95
Tide Water P. L.	25,859.99	25,578.82
Pure Oil	173,774.98	184,069.94
Bradford Trans.	323,059.46	334,264.05
Total	1,623,300.72	1,572,421.44
Daily average	54,110.02	50,723.24

Petroleum Deliveries

The following table exhibits the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for June and July.

	June,'31	July,'31
Nat. Transit	452,276.53	545,139.48
S. W. Pa. P. L.	446,843.13	444,257.19
Eureka P. L.	400,401.52	389,088.42
Buckeye P. L. (Macksburg)	265,663.53	242,021.51
Buckeye P. L. (Cleveland)	1,709.71	1,950.36
Buckeye P. L. (Lima, etc.)	1,950,031.09	1,906,783.68
Indiana P. L.	998,921.71	975,959.98
Cumberland P. L.	103,631.78	115,573.69
Southern P. L.	11,865.96	71,576.50
N. Y. Transit	169,549.34	173,789.42
Northern P. L.	144,262.80	131,895.41
Tide Water P. L.	472,572.62	403,796.82
Pure Oil	290,065.38	189,026.80
Bradford Trans.	319,547.18	482,852.88
Tuscarora	607,326.68	436,907.19
Total	6,634,671.91	6,560,609.33
Daily average	221,155.73	211,632.56

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of June and July.

	June,'31	July,'31
Nat. Transit	698,669.24	657,463.03
S. W. Pa. P. L.	410,763.21	436,536.86
Eureka P. L.	1,839,688.05	1,741,116.22
Buckeye P. L. (Macksburg)	373,836.66	325,616.77
Buckeye P. L. (Cleveland)	86,846.76	88,805.67
Buckeye P. L. (Lima, etc.)	3,163,645.51	3,110,772.07
Indiana P. L.	565,947.84	527,931.01
Cumberland P. L.	629,041.14	636,001.14
Southern P. L.	248,232.04	314,438.42
N. Y. Transit	156,733.77	101,414.97
Northern P. L.	282,847.01	218,880.31
Tide Water P. L.	836,207.12	1,009,357.89
Tuscarora	12,683.45	12,766.39
Pure Oil	426,437.22	424,712.11
Bradford Trans.	238,670.71	114,837.03
Total	9,903,349.53	9,569,849.78
Decrease	824,890.45	333,499.75

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern Pipe Lines at the close of June and July, showing gross stocks of the above fields:

	June,'31	July,'31
Pennsylvania	3,682,748.26	3,439,601.00
Lima	763,086.16	787,866.84
Kentucky	649,341.95	646,541.50
Mid-Continent	4,391,327.49	4,264,314.47
Illinois	.....	18,123.10
Michigan	416,845.67	413,402.87
Total	9,903,349.53	9,569,849.78

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1928	1929	1930	1931
January	52,904	51,749	75,907	53,939
February	57,002	51,833	79,256	55,163
March	57,485	54,352	76,688	54,331
April	56,812	58,444	84,536	54,914
May	62,067	59,902	70,546	53,344
June	58,230	58,833	75,430	54,110
July	57,144	66,087	68,921	50,723
August	57,745	66,087	54,291	.....
September	53,487	67,315	56,595	.....
October	58,100	76,093	58,179	.....
November	53,865	74,831	52,332	.....
December	52,025	74,561	53,999	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1928	1929	1930	1931
January	146,465	165,721	217,623	175,369
February	167,368	159,387	224,355	183,494
March	158,883	161,474	228,846	189,503
April	172,935	169,737	241,845	191,450
May	180,559	184,281	248,383	199,247
June	188,024	185,404	234,401	221,155
July	189,470	194,763	207,094	211,632
August	192,853	194,946	205,506	.....
September	194,138	201,214	193,999	.....
October	176,000	191,367	157,675	.....
November	176,898	202,743	146,638	.....
December	173,572	186,257	143,001	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1929	1930	1931
January	7,596,564	12,220,045	11,831,002
February	8,737,835	12,991,561	11,506,489
March	9,002,058	13,247,217	11,012,162
April	8,978,172	13,253,961	11,044,487
May	8,903,560	12,052,963	10,738,239
June	8,921,275	11,396,855	9,903,349
July	9,211,565	13,268,562	9,569,849
August	9,440,642	13,047,051	.....
September	9,443,067	12,812,018	.....
October	9,441,101	12,437,555	.....
November	9,868,538	11,851,280	.....
December	11,253,953	11,751,952	.....

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, August 1	575,856.71
Runs from wells	494,430.56
Regular deliveries	283,141.98
Other deliveries	247,457.52

The amount of Illinois oil run by the Tide Water Pipe Line Co. in July was 25,578.82 bbls. Deliveries were 6,077.07 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1931—	Runs	Deliveries
July	520,009.38	289,219.05
1930—		
January	543,387.95	498,293.92
February	548,416.33	414,536.59
March	631,944.43	469,119.53
April	530,074.22	509,304.60
May	605,147.37	504,060.84
June	572,662.57	468,658.81
July	604,529.54	388,454.47
August	594,642.13	375,742.43
September	457,001.11	371,691.63
October	478,442.12	320,688.73
November	422,794.68	355,403.12
December	556,418.78	353,719.55
1929—		
January	468,429.04	669,573.19
February	429,284.54	461,262.85
March	424,638.23	356,663.26
April	421,814.98	282,532.65
May	433,231.80	322,513.95
June	510,805.78	320,258.13

Tide Water Pipe Co., Ltd., also delivered in July 92,374.01 bbls. Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA CRUDE AND REFINED OIL AT ATLANTIC AND GULF PORTS

Average barrels per day in 1930-31—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans, Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
July	17,355	7,774	43,419	23,839	6,452	98,839	.....	.....	.....	.....	4,645	103,484
August	7,418	5,742	38,968	21,226	5,258	81,613	.....	.....	.....	.....	97	81,710
September	6,300	6,400	25,600	13,400	9,567	61,267	.....	.....	.....	.....	3,433	64,700
October	2,516	3,065	27,358	16,419	4,903	54,161	.....	.....	.....	.....	5,355	59,516
November	8,367	6,233	33,800	17,733	4,600	70,733	.....	.....	.....	.....	4,800	75,533
December	5,516	4,322	30,645	9,678	3,580	53,742	.....	.....	.....	.....	4,645	58,387
January	8,387	6,613	21,968	14,678	11,096	62,742	.....	.....	.....	.....	6,129	68,871
February	5,787	2,713	29,143	4,000	5,750	47,393	.....	.....	.....	.....	3,750	51,143
March	10,032	1,611	21,388	7,324	8,774	49,129	.....	.....	.....	.....	6,355	55,484
April	5,133	.....	19,200	16,500	10,067	50,900	.....	.....	.....	.....	4,000	54,900
May	4,452	3,064	19,903	11,226	6,258	44,903	.....	.....	.....	.....	2,355	47,258
June	4,267	.....	26,100	6,333	3,500	39,200	.....	.....	.....	.....	.....	39,200

AVERAGE DAILY IMPORTS OF CRUDE AND REFINED OIL AT PRINCIPAL UNITED STATES PORTS

Average barrels per day in 1930-31—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans, Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
July	42,097	9,548	154,968	37,935	36,032	280,500	5,678	9,161	2,097	2,387	19,322	299,903
August	39,032	4,484	145,613	33,355	25,097	247,581	8,419	9,323	8,548	3,000	29,290	276,871
September	38,867	8,533	150,933	34,500	25,567	258,400	6,433	12,234	.....	3,800	22,467	280,867
October	19,839	11,742	146,194	35,355	26,967	240,097	6,065	7,067	2,774	2,545	18,451	258,548
November	39,633	35,900	124,633	36,467	24,667	261,300	2,467	7,366	.....	1,767	11,600	272,900
December	21,419	14,033	122,774	32,839	33,774	224,839	6,290	10,613	2,097	290	19,290	244,129
January	17,613	13,519	154,225	32,902	30,612	248,871	2,032	11,677	2,097	3,097	18,903	267,774
February	31,321	16,929	127,786	31,714	26,857	234,607	4,536	11,571	.....	536	16,643	251,250
March	37,645	15,935	141,160	26,290	21,129	238,161	4,065	2,580	.....	1,968	8,613	246,774
April	35,000	10,533	105,000	29,767	35,533	215 933	2,733	3,400	.....	.....	6,133	221,966
May	30,129	8,774	107,000	25,452	26,710	198,065	.....	2,000	.....	.....	2,000	200,065
June	30,067	10,833	111,767	27,000	20,833	200,500	3,300	5,500	2,167	1,333	12,300	212,800

GROSS PRODUCTION OF CRUDE OIL IN THE UNITED STATES FOR 12 MONTHS

(In Barrels of 42 Gallons)

1930—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
July:	Month	18,802,024	18,022,514	25,873,521	3,541,499	1,713,880	2,079,769	3,275,894	3,830,000	77,248,811
	Daily average	606,517	581,694	857,856	114,239	55,280	67,089	105,674	123,548	2,491,897
August:	Month	13,770,466	17,162,034	25,069,598	3,491,530	1,700,102	2,151,130	3,193,341	3,417,000	74,955,121
	Daily average	605,499	553,614	808,696	112,630	54,842	69,391	103,011	110,226	2,417,909
September:	Month	17,984,306	16,509,120	23,111,822	3,405,510	1,583,280	2,008,060	3,239,010	3,396,000	71,237,108
	Daily average	599,477	550,304	770,394	113,517	52,776	66,935	107,967	113,200	2,374,570
October:	Month	18,244,065	16,632,523	23,626,553	3,517,913	1,636,552	2,142,885	3,225,550	3,627,000	72,707,029
	Daily average	588,518	536,533	762,147	115,223	52,792	69,125	104,050	117,000	2,345,388
November:	Month	18,109,459	14,941,770	22,035,222	3,459,330	1,557,870	2,136,948	2,957,100	3,222,000	68,419,699
	Daily average	603,648	498,059	734,507	115,311	51,929	71,231	98,570	107,400	2,280,656
December:	Month	17,786,728	15,057,103	21,810,359	3,432,661	1,590,951	2,157,534	3,118,663	3,325,000	68,281,999
	Daily average	573,765	485,713	703,560	110,731	51,321	69,595	100,602	107,355	2,202,645
1931—										
January:	Month	16,485,738	14,850,953	20,019,212	3,432,475	1,574,955	2,135,037	2,966,142	3,374,000	64,838,512
	Daily average	531,798	479,063	645,781	110,725	50,805	68,872	95,682	108,839	2,091,565
February:	Month	14,930,932	13,531,980	18,957,571	3,341,016	1,402,492	1,981,616	2,747,024	3,129,000	60,021,631
	Daily average	533,248	483,285	677,057	119,322	50,089	70,772	98,108	111,750	2,143,629
March:	Month	16,364,842	16,627,687	22,453,619	3,498,598	1,469,245	2,061,576	2,898,035	3,374,000	68,747,602
	Daily average	527,898	536,377	724,310	112,858	47,395	66,502	93,485	108,839	2,217,665
April:	Month	15,803,541	16,315,990	26,887,717	3,281,880	1,412,220	2,008,021	2,901,870	3,273,000	73,384,239
	Daily average	526,785	559,255	896,257	109,396	47,074	66,934	96,729	109,100	2,412,808
May:	Month	16,448,960	17,333,867	28,708,684	3,341,366	1,446,274	2,232,568	3,098,419	3,190,000	75,800,138
	Daily average	530,612	559,157	926,086	107,786	46,654	72,018	99,949	102,900	2,445,166
June:	Month	15,641,436	16,678,200	29,139,833	3,175,440	1,344,450	1,850,511	2,986,200	3,166,000	73,982,070
	Daily average	521,381	555,940	971,327	105,848	44,815	61,684	99,540	105,533	2,466,069
Total 12 months		205,372,485	194,173,741	287,793,711	40,973,128	18,432,071	24,945,645	36,607,248	40,326,000	848,624,029